

# PR19 Appointed business plan table commentaries

April 2019

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## App1 – Performance commitments (PCs) and outcome delivery incentives (ODIs)

### Overview

The table does not lend itself to a line by line commentary so we have provided a summary commentary by column. Detailed information about how the table has been populated can be found in the supporting documents:

- i. The development of our measures of success and performance commitments is set out in detail in our supporting document 5.2 PR19 Performance Commitments updated **B2.2.WSH.OC Performance Commitments and Deadbands**.
- ii. The development of our outcome delivery incentives is set out in detail in our supporting document 5.5 PR19 Outcome Delivery Incentives updated **B2.2.WSH.OC Performance Commitments and Deadbands**.

### Column 1 Unique ID

*Unique identifier for the performance commitment. It will be used in the Ofwat PC/ODI database and has been generated as follows:*

*“PR19” + water company acronym + “\_” + PC reference. The water company acronym is taken from the 'AppValidation' worksheet.*

*For example: PR19XXX\_ABC01 (where XXX is the company acronym and ABC01 is the PC reference)*

This is a calculated column.

### Column 2 Outcome

*Outcome name (free-format text with no validation)*

This column categorises our PCs into 7 outcomes, these are in line with our customer promises and colleague promises.

### Column 3 PC history

*Indicates whether this is a continuation, revised or new PC.*

- *PR14 continuation - can the PR19 performance levels be safely/meaningfully be seen as a continuation of the PR14 performance levels? That is, would a comparison of the performance levels over the two AMP periods (AMP6 and AMP7) be reasonable and reliable?*
  - *PR14 revision - examples:*
    - a. *PR19 common performance commitment with a different definition to the equivalent PR14 performance commitment*
    - b. *similar PC but the definition has changed enough to not allow a safe/meaningful comparison of the PR14 and PR19 performance levels*
    - c. *was a PR14 sub-measure but is now a separate PC*
  - *PR19 new - there was no identical or similar PR14 performance commitment*
- If none of the above apply, leave blank and explain in the business plan commentary.*

The column indicates whether the PC is a continuation, revised or new PC. The majority of our PCs are new or revised.

### Column 4 PC ref. (company)

*Free-format, but the reference number must be unique within each company's set of performance commitments*

*Duplicate reference numbers will be highlighted in red*

This column provides our PC references, which are linked to our promises.

**Column 5 PC name**

*Name of the performance commitment (free-format text with no validation)*

The column provides the names of the PCs

**Column 6 PC short description**

*Name of the performance commitment (free-format text with no validation)*

The column provides a short description of the PCs

**Column 7- Price Control Allocation (%)**

*Enter the allocation for each price control (as a percentage, to 1 decimal place)*

*Notes*

- a PC may be allocated over more than one price control if it is appropriate for the same performance levels to apply to each of the price controls. Where a PC is allocated over more than one price control companies should explain clearly in the business plan commentary how the allocation has been derived
- where the allocation between price controls does not remain constant over the five year period (2020-21 to 2024-25) there should be separate PCs
- the total allocation across price controls must equal 100%
- for PCs with a financial incentive, these percentages will be used to allocate outperformance payments and underperformance penalties across price controls

Out of the 47 Performance commitments 34 have been allocated to a single price control. The remaining 13 performance commitments have been allocated between price controls where multiple price controls impact on the level of performance. The method of allocation for these 13 performance commitments is outlined below:

PC	Allocation Method						
Sv2- Developer services customer satisfaction	Allocated between Water Network+ and Wastewater Network+ based on developer services revenue, following Ofwat’s guidance. Allocation calculation:						
		Water Network+		Wastewater Network+		Total	
	Source	WN3 L25		WWN5 L25			
	Revenue for AMP7 (£m)	65.1		43.5		108.6	
	Revenue (%)	60.0%		40.0%		100%	
Sv3- Customer Trust (ODI)	Customer Trust is allocated between water resources, water network plus, wastewater network plus, bioresources and residential retail. These price controls influence customer’s experience and level of trust. The allocation is based on revenue per price control.						
		Water Resources	Water Network+	Wastewater Network+	Bio-resources	Residential Retail	Total
	Source	WR3 L27	WN3 L27	WWN5 L27	Bio 4 L27	R7 L19	
	Revenue for AMP7 (£m)	167	1,284	1,840	168	319	3,757
	Revenue (%)	4.4%	34.2%	48.4%	4.5%	8.5%	100%

Welsh Water Appointed Business Tables Commentaries

PC	Allocation Method							
Rt4- Total Complaints (ODI)	The level of complaints are driven by the customer facing components price controls. Total complaints is allocated between Water Network Plus, Wastewater Network Plus and Residential retail. The allocation is based on the revenue per price control.							
		Water Network+	Wastewater Network+	Residential Retail	Total			
	Source	WN3 L27	WWN5 L27	R7 L19				
	Revenue for AMP7 (£m)	1,284	1,840	319	3,422			
	Revenue (%)	37.5%	53.2%	9.3%	100%			
B11- Change in average household bill	The change in the average household bill is allocated between water resources, water network plus, wastewater network plus, bioresources and residential retail components price controls. The allocation is based on revenue per price control.							
		Water Resources	Water Network+	Wastewater Network+	Bio-resources	Residential Retail	Total	
	Source	WR3 L27	WN3 L27	WWN5 L27	Bio 4 L27	R7 L19		
	Revenue for AMP7 (£m)	167	1,284	1,840	168	319	3,757	
	Revenue (%)	4.4%	34.2%	48.4%	4.5%	8.5%	100%	
B13- Company level of bad debt	Company level bad debt is allocated between residential retail and business retail based on revenue per price control.							
		Residential Retail		Business Retail		Total		
	Source	R7 L19		R7 L22				
	Revenue for AMP7 (£m)	319		38		358		
	Revenue (%)	89.2%		10.8%		100%		
B14- Unbilled Properties	Company level bad debt is allocated between residential retail and business retail based on revenue per price control.							
		Residential Retail		Business Retail		Total		
	Source	R7 L19		R7 L22				
	Revenue for AMP7 (£m)	319		38		358		
	Revenue (%)	89.2%		10.8%		100%		
B15- Financial Resilience	Financial is allocated between water resources, water network plus, wastewater network plus, bioresources, residential retail and business retail. The allocation is based on revenue per price control.							
		Water Resources	Water Network+	Wastewater Network+	Bio-resources	Residential Retail	Business Retail	Total
	Source	WR3 L27	WN3 L27	WWN5 L27	Bio 4 L27	R7 L19	R7 L22	
	Revenue for AMP7 (£m)	167	1,284	1,840	168	319	38	3,757
	Revenue (%)	4.4%	33.8%	48.0%	4.4%	8.4%	1.0%	100%
Ft1- Risk of severe restrictions in drought	The risk of severe restrictions in drought is allocated between Water Resources and Water Network Plus. The allocation is based on revenue per price control.							
		Water Resources		Water Network+		Total		
	Source	WR3 L27		WN3 L27				
	Revenue for AMP7 (£m)	167		1,284		1,450		
	Revenue (%)	11.5%		88.5%		100%		

## Welsh Water Appointed Business Tables Commentaries

PC	Allocation Method							
Ft3- Energy Self-Sufficiency	Energy Self-Sufficiency is allocated between water resources, water network plus, wastewater network plus, bioresources, residential retail and business retail. The allocation is based on revenue per price control over the AMP. The measure is allocated as each component contributes to generating or consuming energy.							
	Water Resources	Water Network+	Wastewater Network+	Bio-resources	Residential Retail	Business Retail	Total	
Source	WR3 L27	WN3 L27	WWN5 L27	Bio 4 L27	R7 L9	R7 L22		
Revenue for AMP7 (£m)	167	1,284	1,840	168	319	38	3,757	
Revenue (%)	4.4%	33.8%	48.0%	4.4%	8.4%	1.0%	100%	
Ft10- Community Education (ODI)	Community Education is allocated between Water Network Plus and Wastewater Network Plus as the activities are undertaken by these price control areas. The allocation is based on revenue per price control over the AMP.							
	Water Network+			Wastewater Network+			Total	
Source	WN3 L27			WWN5 L27				
Revenue for AMP7 (£m)	1,284			1,840			3,103	
Revenue (%)	41.4%			58.6%			100%	
Co1- Reportable injuries	The total number of reportable injuries is allocated between all of the price controls. The allocation is based on Headcount.							
	Water Resources	Water Network+	Wastewater Network+	Bio-resources	Residential Retail	Business Retail	Total	
Headcount (%)	4.0%	39.0%	31.0%	7.0%	17.0%	2.0%	100%	
Co2- Employee training and expertise	Employee training and expertise is allocated between all of the price controls. The allocation is based on Headcount.							
	Water Resources	Water Network+	Wastewater Network+	Bio-resources	Residential Retail	Business Retail	Total	
Headcount (%)	4.0%	39.0%	31.0%	7.0%	17.0%	2.0%	100%	
Co3- Employee Engagement	Employee engagement is allocated between all of the price controls. The allocation is based on Headcount.							
	Water Resources	Water Network+	Wastewater Network+	Bio-resources	Residential Retail	Business Retail	Total	
Headcount (%)	4.0%	39.0%	31.0%	7.0%	17.0%	2.0%	100%	

### Column 15 Price control allocation (%) total

*The price control allocation total is calculated - it will be highlighted in red if the total does not equal 100%*

Calculated Cell

### Column 16 ODI Type

*NFI (no financial incentive)*

*OUT (outperformance payment only)*

*UNDER (underperformance penalty only)*

*OUT and UNDER (outperformance payment and underperformance penalty)*

Column 16 denotes whether the PC has no financial outperformance payment, an underperformance penalty only or outperformance payment and underperformance payment. We have 49 performance commitments of which 19 are Non-Financial (NFI), 22 are Out and Under and 8 are Under. Our approach to the allocation of the PCs is outlined in the supporting document 5.5 PR19 Outcome Delivery Incentives.

#### Column 17 ODI Form

**Revenue** = Revenue adjustment

*Note 1: under the new customer measure of experience (C-MeX) and developer services measure of experience (D-MeX) mechanisms, any outperformance payment or underperformance penalty will be an adjustment to revenue*

*Note 2: all in-period ODIs are revenue adjustments*

**RCV** = RCV adjustment

**RCV or Revenue** = RCV or Revenue adjustment (for example, where an outperformance payment is applied as an adjustment to the RCV and an underperformance penalty is applied as a revenue adjustment)

**Shareholder** = underperformance penalty is applied as an investment for the benefit of customers financed by shareholders with no RCV adjustment

**Revenue or shareholder** = Revenue adjustment or underperformance penalty investment financed by shareholders with no RCV adjustment (for example, where an outperformance payment is applied as a revenue adjustment and an underperformance penalty is applied as an investment financed by shareholders with no RCV adjustment)

*Leave blank if the ODI type = NFI (non-financial incentive)*

All of our 30 financial PCs have a revenue adjustment.

#### Column 18 ODI Timing

*For PCs with a financial ODI, select 'In-period', 'End of AMP' or 'Both'*

*'Both' might apply, for example, if an ODI has 'in-period' underperformance penalties and 'end of AMP' outperformance payments*

*Leave blank if the ODI type = NFI (non-financial incentive)*

In-Period ODIs are applied to 29 of our 30 ODIs. An end of AMP ODI has been applied to km of rivers improved. Further information on the ODI timing is in the supporting document 5.5 PR19 Outcome Delivery Incentives.

#### Column 19 Primary category

*Primary category*

*The primary category is a means of sign-posting similar PCs.*

*This is not an exact science as many PCs overlap categories and PCs with the same primary category may not be directly comparable.*

This column assigns a primary category to each PC

#### Column 20 PC unit

*For example: %, £m, category, N/A, nr, rank, score, TBC, text, time*

This column is the unit of the PC.

The performance commitment units have been updated in our IAP response for pollution incidents, internal sewer flooding and external sewer flooding since our September business plan. These measures are now normalised by the km of sewers or number of connections following Ofwat's standard measurement units.

#### Column 21 PC unit description

*Description of the PC unit (free-format text with no validation)*

This column is the unit description per PC

**Column 22 Decimal places**

*Number of decimal places used, where applicable*

This column provides the number of decimal places for monitoring

**Column 23 Direction of improvement**

*'Up' if an increase in the numeric value or score means a better (improving) performance*

*'Down' if a decrease in the numeric value or score means a better (improving) performance*

*Leave blank if neither of the above apply*

This column outlines if an increase or decrease in the numeric value means improving performance.

**Column 24 Common performance commitment**

*If the PC is one of the 14 common performance commitments select the appropriate entry from the drop-down menu. Otherwise leave blank.*

This column denotes if the PC is one of the 14 common performance commitments.

**Column 25 Special Cost Factor**

*All' if the PC relates wholly to a PR19 special cost factor claim*

*'Part' if the PC relates partly to a PR19 special cost factor claim*

*Otherwise leave blank*

We have not identified any measures relating specifically to special cost factors. This column has been left blank in accordance with the guidance.

**Column 26 Scheme Specific Factor**

*'All' if the PC relates wholly to scheme-specific factors/elements*

*'Part' if the PC relates partly to scheme-specific factors/elements*

*Otherwise leave blank*

Three of our ODIs have been identified as Scheme Specific Factors. These three ODIs are customer protection ODIs for our reservoir enhancement programme, Cwm Tag water supply strategy and water network improvement programme. Further information on these ODIs are outlined in [B2.4.WSH.OC- Outcome Delivery Incentive IAP Response](#).

**Column 27 Asset Health**

*'All' if the PC relates wholly to asset health*

*'Part' if the PC relates partly to asset health*

*Otherwise leave blank*

We have identified seven measures relating to asset health.

**Column 28 NEP**

*All' if the PC relates wholly to the National Environment Programme (NEP)*

*'Part' if the PC relates partly to the National Environment Programme (NEP)*

*Otherwise leave blank*

We have identified one measure relating to the NEP.

**Column 29 AIM**

*'Yes' if the PC relates to the Abstraction Incentive Mechanism (AIM). Otherwise leave blank*

*Site-level AIM data should be entered in table App3 - cells are greyed out in table App1 if the site-level cells are in table App1*

We have not identified any measures relating to AIM. This column has been left blank in accordance with the guidance.

#### Column 30 Customers' relative priority / importance

*Free-format text with no validation*

*Examples: high/medium/low, quartiles, quintiles, 1 to 10. Please explain the ranking/scale in your business plan commentary.*

We have identified our customers priorities (on a high / medium / low scale) from our triangulation research set out in our supporting document 1.1K PR19 Customer Engagement: Phase 1 triangulation.

#### Column 31 Past performance levels

*For the ten years 2010-11 to 2019-20: enter actual performance levels where data is available, otherwise forecasts*

These columns provide data for our past performance on our performance commitments, where it is available. Where possible we have used data from annual performance reports to populate this information but many of the measures are new or modified so this is not available. In other cases we have been able to identify data from our records to align with the new definition. An example is sewer collapses, where we have been able to identify data from our existing records and match it to our current understanding of the new definition to provide some historical data. However in some cases it was not possible to complete more than one data point relating to past performance. In three cases we have entered a value of 0% in 2019/20 for sewer collapses. This is for new commitments where the current performance is particularly uncertain and so we have adopted the principle described in the methodology of setting a target as a percentage change from 2019/20 actual performance.

#### Column 41 2020-25 performance commitment levels

*For the five years 2020-21 to 2024-25: enter the performance commitment levels*

This column outlines our performance commitment levels for 2020-25. Information showing how we arrived at these levels is detailed in Supporting Document 5.2. **We have revised our performance commitment levels for internal sewer flooding, pollution incidents and per capital consumption. Further information can be found in B2.1.WSH.OC- Performance commitments IAP response.**

#### Column 46 Longer-term projections

*The 2020-25 PC levels should be supported by longer-term projections for at least a further ten years (that is, for the reporting years 2025-26 to 2034-35 inclusive). These projections are to encourage companies to consider their long-term ambitions and help customers and stakeholders engage on longer-term issues.*

*The additional columns allow companies to include longer-term projections, beyond our requirement of ten years, for the reporting years 2035-36 to 2039-40 and for the five years 2040-45, where these are available.*

We have set the targets for each of our performance commitments beyond the end of 2025. Information showing how we arrived at these levels is detailed in Supporting Document 5.2.

#### Column 62 Financial ODI may accrue or apply

*For the five years 2020-21 to 2024-25: 'Yes' if an outperformance payment or underperformance penalty may accrue or apply.*

*Otherwise leave blank*

This column outlines whether a financial ODI outperformance or underperformance payment may accrue or apply. For in-period ODIs a financial payment applies in each year. For the one end of period ODI, km of rivers improved a financial payment only applies in the final year of the period, 2024-25.

#### Column 67 Enhanced underperformance penalty collar

*For the five years 2020-21 to 2024-25: If there is an enhanced underperformance penalty, enter the enhanced underperformance penalty collar.*

*The enhanced underperformance penalty collar is the last (worst) performance level at which a company can accrue the enhanced underperformance penalty.*

*The enhanced underperformance penalty collar is set at a worse performance level than the standard underperformance penalty collar, if there is an enhanced underperformance penalty.*

*Leave blank if there is no enhanced underperformance penalty.*

We are not proposing any enhanced underperformance payments. This column has been left blank in accordance with the guidance.

#### Column 72 Standard underperformance penalty collar

*For the five years 2020-21 to 2024-25: enter the standard underperformance penalty collar, where applicable. Otherwise leave blank.*

*The standard underperformance penalty collar is the last (worst) performance level at which a company can accrue the standard underperformance penalty.*

*The standard underperformance penalty collar is set at a worse performance level than the underperformance penalty deadband, if there is a standard underperformance penalty.*

An underperformance penalty collar have been included for each out and under and under PC. The penalty collar has been set at the forecast P10 level of performance. Further information on determining the P10 level is outlined in the supporting document 5.5 PR19 Outcome Delivery Incentives.

**We have revised the P10 level of performance reflecting changes in the performance targets for internal sewer flooding and pollution incidents. Further information is outlined in B2.4.WSH.OC-Outcome Delivery Incentives IAP Response.**

Tap Water Quality Compliance Risk Index- The penalty deadband for CRI is the performance experienced by the Top Third of customers. The underperformance penalty collar is set at 9 points below this level of performance.

Customer Trust- the penalty deadband for customer trust is the target level of performance, the performance experienced by the upper quartile customers. The underperformance penalty collar is set at 0.5 points below this level of performance.

#### Column 77 Underperformance penalty deadband

*For the five years 2020-21 to 2024-25: enter the underperformance penalty deadband, where applicable. Otherwise leave blank.*

*The underperformance penalty deadband is the first performance level at which the standard underperformance penalty rate applies.*

*For standard underperformance penalties it is the performance level against which underperformance penalties are calculated.*

The underperformance penalty deadband is the first performance level at which the standard underperformance penalty rate applies. This has been set for all measures at the target level of performance for each year of the price control period in Column 41.

**In our IAP response have revised the deadband to 99% for Water and Wastewater treatment works compliance, further information is available in B2.1.WSH.OC Performance commitments IAP response.**

#### Column 82 Outperformance payment deadband

*For the five years 2020-21 to 2024-25: enter the outperformance payment deadband, where applicable. Otherwise leave blank.*

*The outperformance payment deadband is the first performance level at which the standard outperformance payment rate applies.*

*For standard outperformance payments it is the performance level against which outperformance payments are calculated.*

The outperformance penalty deadband is the first performance level at which the standard outperformance payment rate applies. This has been set for all measures at the target level of performance for each year of the price control period in Column 41.

**In our IAP response we have revised our outperformance deadband for business customer satisfaction following a change in the performance target.**

#### Column 87 Standard out performance payment cap

*For the five years 2020-21 to 2024-25: enter the standard outperformance payment cap, where applicable. Otherwise leave blank.*

*The standard outperformance payment cap is the last (best) performance level at which a company can accrue the standard outperformance payment.*

*The standard outperformance payment cap is set at a better performance level than the outperformance payment deadband, if there is a standard outperformance payment.*

An outperformance payment collar have been included for each out and under PC. The outperformance payment cap has been set at the forecast P90 level of performance. Further information on determining the P10 level is outlined in the supporting document 5.5 PR19 Outcome Delivery Incentives.

**We have revised the P10 level of performance reflecting changes in the performance targets for internal sewer flooding, pollution incidents and business customer satisfaction. Further information is outlined in B2.4.WSH.OC- Outcome Delivery Incentives IAP Response.**

Customer Trust - the penalty deadband for customer trust is the target level of performance, the performance experienced by the upper quartile customers. The underperformance penalty collar is set at 0.25 points above this level of performance.

#### Column 92 Enhanced outperformance payment cap

*For the five years 2020-21 to 2024-25: If there is an enhanced outperformance payment, enter the enhanced outperformance payment cap.*

*The enhanced outperformance payment cap is the last (best) performance level at which a company can accrue the enhanced outperformance payment.*

*The enhanced outperformance payment cap is set at a better performance level than the standard outperformance payment cap, if there is an enhanced outperformance payment.*

*Leave blank if there is no enhanced outperformance payment.*

We are not proposing any enhanced outperformance payments. This column has been left blank in accordance with the guidance.

#### Column 97 Standard underperformance penalty rates

*Standard underperformance penalty rates (£ million to 6 decimal places), where applicable. Otherwise leave blank.*

*Standard underperformance penalty rates should be entered as negative values (for example: -1.2345)*

*Standard underperformance penalty rates 2 and 3 should only be used if the 'Standard ODI calculation' indicator is set to 'No'*

*Note: AIM underperformance penalty rates should be entered in table App3, not in table App1*

This column denotes the underperformance penalty rate where appropriate. The values have been entered as a negative value in accordance to the guidance. If an underperformance rate is not applicable this has been left bank in accordance to the guidance. Further information on the calculation of the underperformance rate is outlined in the supporting document 5.5 PR19 Outcome

Delivery Incentives and B2.4.WSH.OC- Outcome Delivery Incentives IAP Response. Standard underperformance penalty 2 and 3 have been left blank.

#### Column 100 Enhanced underperformance penalty rate

*Enhanced underperformance penalty rate (£ million to 6 decimal places), where applicable.*

*Otherwise leave blank.*

*Enhanced underperformance penalty rates should be entered as negative values (for example: -1.2345)*

We are not proposing any enhanced underperformance payments. This column has been left blank in accordance with the guidance.

#### Column 101 Standard outperformance payment rates

*Standard outperformance payment rates (£ million to 6 decimal places), where applicable. Otherwise leave blank.*

*Standard outperformance payment rates should be entered as positive values (for example: 1.2345)*

*Standard outperformance payment rates 2 and 3 should only be used if the 'Standard ODI calculation' indicator is set to 'No'*

*Note: AIM outperformance payment rates should be entered in table App3, not in table App 1*

This column denotes the outperformance payment rate where appropriate. If an outperformance rate is not applicable this has been left blank in accordance to the guidance. Further information on the calculation of the outperformance rate is outlined in the supporting document 5.5 PR19 Outcome Delivery Incentives and B2.4.WSH.OC- Outcome Delivery Incentives IAP Response. Standard outperformance payment rates 2 and 3 have been left blank.

#### Column 104 Enhanced outperformance payment rate

*Enhanced outperformance payment rate (£ million to 6 decimal places), where applicable. Otherwise leave blank.*

*Enhanced outperformance payment rates should be entered as positive values (for example: 1.2345)*

We are not proposing any enhanced outperformance payments. This column has been left blank in accordance with the guidance.

#### Column 105 Standard ODI calculation

*'No' if the PC has a non-standard financial incentive, otherwise leave blank.*

*For the purposes of this indicator a standard ODI is one that can be derived using this calculation:*

*| ( ( (Actual performance level - deadband) x incentive rate in £m ) x standard ODI operand ) |*

*So, for example, if the actual performance level is 1.37, the deadband is 1.29, the incentive rate\* is 0.412, and the standard ODI operand is 1.000, the result as an absolute value would be:*

*| ( ( (1.37-1.29) x 0.412 ) x 1.000 ) | = 0.08 x 0.412 x 1.000 = 0.03296 = £32,960*

*\* either underperformance penalty incentive rate 1 or overperformance payment incentive rate 1*

*Leave blank for a PC with an enhanced outperformance payment and/or underperformance penalty if the calculation of both outperformance payments (standard and enhanced) and underperformance penalties (standard and enhanced) follows the calculation above (where you would use 'standard outperformance payment cap' instead of 'deadband' for the enhanced outperformance payment and 'standard underperformance penalty collar' instead of 'deadband' for the enhanced underperformance penalty).*

*Non-standard financial incentives will be calculated manually using the additional details in the PR19 final determination company-specific appendices (plus recalibrated ODI rates and/or corrigenda, where applicable).*

This column denotes whether the standard ODI calculation applies. No has been applied to C-Mex and D-Mex following the guidance. Standard ODI calculations apply to the remaining ODIs.

#### Column 106 Standard ODI operand

*Some PCs with a financial ODI have an incentive rate that uses a fraction or multiple of the PC unit. This field is used to hold the conversion factor, to 3 decimal places.*

*For example, if rather than being calculated as:*

*£m / PC unit / year*

*the outperformance payment or underperformance penalty is calculated as:*

*£m / 0.1 PC unit / year*

*then the conversion factor is 10.000*

**This column applies a conversion factor to PC Unit.**

#### Column 107 Standard ODI operand note

*Free-format text with no validation*

**No free text**

#### Column 108 Maximum enhanced underperformance penalty

*For the five years 2020-21 to 2024-25 and also a total for the 5-year period (the 5-year total will usually be the total of the five individual years, but may not be): enter the maximum enhanced underperformance penalty, where applicable (-£ million to 4 decimal places).*

*Underperformance penalties should be entered as negative values (for example: -1.2345).*

*Otherwise leave blank.*

*Important note: the maximum underperformance penalty and outperformance payment columns (standard and enhanced) all include formulae so that the values are automatically calculated if the 'Standard ODI calculation' cell has been left blank (the cell has conditional formatting so that, in this case, it becomes a blue 'calculation' cell, but is not locked). If the 'Standard ODI calculation' cell has been set to 'No', then companies should overwrite the formulae with manual calculations.*

**This is a calculated cell. The columns are blank as we have not proposed an enhanced underperformance payments.**

#### Column 114 Maximum standard underperformance penalty

*For the five years 2020-21 to 2024-25 and also a total for the 5-year period (the 5-year total will usually be the total of the five individual years, but may not be): enter the maximum standard underperformance penalty, where applicable (-£ million to 4 decimal places).*

*Underperformance penalties should be entered as negative values (for example: -1.2345)*

*Otherwise leave blank.*

*Important note: the maximum underperformance penalty and outperformance payment columns (standard and enhanced) all include formulae so that the values are automatically calculated if the 'Standard ODI calculation' cell has been left blank (the cell has conditional formatting so that, in this case, it becomes a blue 'calculation' cell, but is not locked). If the 'Standard ODI calculation' cell has been set to 'No', then companies should overwrite the formulae with manual calculations.*

**This is a calculated cell. Tap Water Quality Compliance Index and Customer Trust has an error. The target level of performance and the underperformance deadband is the performance experienced by the top 1/3 of customers and the top 25<sup>th</sup> percentile of customer respectively. Further information on the calculation of the underperformance payment is in the supporting document 5.5 PR19 Outcome Delivery Incentives.**

#### Column 120 Maximum standard outperformance payment

*For the five years 2020-21 to 2024-25 and also a total for the 5-year period (the 5-year total will usually be the total of the five individual years, but may not be): enter the maximum standard outperformance payment, where applicable (£ million to 4 decimal places).*

*Outperformance payments should be entered as positive values (for example: 1.2345)*

*Otherwise leave blank.*

*Important note: the maximum underperformance penalty and outperformance payment columns (standard and enhanced) all include formulae so that the values are automatically calculated if the 'Standard ODI calculation' cell has been left blank (the cell has conditional formatting so that, in this case, it becomes a blue 'calculation' cell, but is not locked). If the 'Standard ODI calculation' cell has been set to 'No', then companies should overwrite the formulae with manual calculations.*

This is a calculated cell. Customer Trust has an error. The target level of performance and the outperformance deadband is the performance experienced by the top 25<sup>th</sup> percentile of customer respectively. Further information on the calculation of the outperformance payment is in the supporting document 5.5 PR19 Outcome Delivery Incentives.

#### Column 126 Maximum enhanced outperformance payment

*For the five years 2020-21 to 2024-25 and also a total for the 5-year period (the 5-year total will usually be the total of the five individual years, but may not be): enter the maximum enhanced outperformance payment, where applicable (£ million to 4 decimal places).*

*Outperformance payments should be entered as positive values (for example: 1.2345)*

*Otherwise leave blank.*

*Important note: the maximum underperformance penalty and outperformance payment columns (standard and enhanced) all include formulae so that the values are automatically calculated if the 'Standard ODI calculation' cell has been left blank (the cell has conditional formatting so that, in this case, it becomes a blue 'calculation' cell, but is not locked). If the 'Standard ODI calculation' cell has been set to 'No', then companies should overwrite the formulae with manual calculations.*

This is a calculated cell. The columns are blank as we have not proposed an enhanced outperformance payments.

#### Column 132 P10 underperformance penalties

*For the five years 2020-21 to 2024-25 and also a total for the 5-year period (the 5-year total will usually be the total of the five individual years, but may not be): enter the P10 underperformance penalty values, where applicable (£ million to 4 decimal places).*

*Underperformance penalties should be entered as negative values (for example: -1.2345).*

*Otherwise leave blank.*

*P10 can be defined as follows: there is a 10% probability of an outturn occurring below the identified range. By definition P10 returns are relatively unlikely to occur and this is especially the case cumulatively across all ODIs at the same time.*

*We would not necessarily expect the P10 figures in table App1 to equal the P10 scenario figures in table App26.*

The column is the underperformance penalties at P10. The value in this column is equal to the value in column 114 as the underperformance penalty collar in column 72 is set at the P10 level of performance. Further information is in the supporting document 5.5 PR19 Outcome Delivery Incentives.

#### 138 P10 Associated Performance Commitment Levels

*Enter the performance commitment levels that are used to derive the P10 underperformance penalties, for the five years 2020-21 to 2024-25.*

*Enter these using the same units as the 2020-25 performance commitment levels.*

**This column provides the P10 performance commitment levels. Further information on the calculation of the P10 level is in the supporting document 5.5 PR19 Outcome Delivery Incentives and B2.4.WSH.OC Outcome Delivery Incentives IAP response.**

#### Column 143 P90 outperformance payments

*For the five years 2020-21 to 2024-25 and also a total for the 5-year period (the 5-year total will usually be the total of the five individual years, but may not be): enter the P90 outperformance payment values, where applicable (£ million to 4 decimal places).*

*Outperformance payments should be entered as positive values (for example: 1.2345)*

*Otherwise leave blank.*

*P90 can be defined as follows: there is a 10% likelihood of achieving a return above the identified range. By definition P90 returns are relatively unlikely to occur and this is especially the case cumulatively across all ODIs at the same time.*

*We would not necessarily expect the P90 figures in table App1 to equal the P90 scenario figures in table App26.*

The column is the outperformance payments at P90. The value in this column is equal to the value in column 120 as the outperformance payment cap in column 87 is set at the P90 level of performance. Further information is in the supporting document 5.5 PR19 Outcome Delivery Incentives.

#### 149 P90 Associated Performance Commitment Levels

*Enter the performance commitment levels that are used to derive the P90 outperformance payments, for the five years 2020-21 to 2024-25.*

*Enter these using the same units as the 2020-25 performance commitment levels.*

**This column provides the P10 performance commitment levels. Further information on the calculation of the P10 level is in the supporting document 5.5 PR19 Outcome Delivery Incentives and B2.4.WSH.OC Outcome Delivery Incentives IAP response.**

#### Column 154 – Marginal cost

*Enter the marginal cost of improving performance by one unit (£ per unit per household to 2 decimal places). Otherwise leave blank.*

The marginal cost has been calculated from an analysis of the enhancement investment plan split into the performance commitments that benefit from projects and programmes. The costs have been annualised using the cost of capital and then divided by the number of performance units improved and number of customers served to create the marginal cost. We have provided figures to four decimal places, where it was necessary in order to show a value.

We believe that this method undervalues the marginal cost because we have ensured there is no double counting in the allocation of costs between commitments. An example of where this creates a problem is with water networks investment. Much of the investment that we plan in this area affects all service measures; supply interruptions, acceptability of water, leakage, low pressure. If we were to consider each measure in isolation we would have a higher marginal cost than with the approach we have taken of spreading the cost over multiple measures.

We have only identified marginal cost values for 20 of our commitments. The remaining measures are either maintaining stable performance or will be improved through ongoing process improvements rather than investment.

**In our September submission we included the marginal cost for improvements up to the level of our AMP7 target. We have now revised the figures to show the marginal cost for improvements beyond our AMP7 target. This is more in line with the methodology for calculating ODI rates, which considers outperformance of targets.**

#### Columns 155-164– Marginal benefit

We have limited benefits data available to populate this table. Our customer research was undertaken early in the process to ensure that customer views were available to inform plan development. This meant that much of the Ofwat methodology, in particular definition of the new

common performance measures (including resilience) was not available and not incorporated in our valuations work.

Our assessment of customer benefits that has informed target setting has come from a wide range of research, including much qualitative rather than quantitative research.

We have explored methods other than willingness to pay for valuing benefits but have not found any other sources that are robust enough to present in this table.

In these columns we have provided figures to four decimal places, where it was necessary in order to show a value. **We have revised our Marginal Benefit to separately identify the two pieces of customer research.**

## App1a guidance and line definitions

### Overview

The table does not lend itself to a line by line commentary so we have provided a summary commentary by column.

### Pre Populated Columns from APP1

Column 1 Unique ID

Column 2 Outcome

Column 3 PC history

Column 4 PC ref. (company)

Column 5 PC name

Column 6 PC short description

Column 7 ODI type

Column 8 Primary category

Column 9 PC unit

Column 10 PC unit description

Column 11 Decimal places

Column 12 Direction of improving performance

Column 13 Common performance commitment

### Column 14 Triangulated WTP / Marginal benefits estimate

*Provide the exact willingness to pay (WTP) / marginal benefits estimate used in the calculation of the standard ODI incentive rates. This estimate should be presented in the measurement unit described (£ per unit per household, 2017-18 CPIH deflated, financial year average).*

**This column reports the triangulated marginal benefit from our two pieces of customer research. For the common measures we have weighted our research findings to set our rates equal at Ofwat's lower bound. Further information on our approach is outlined in B2.4.WSH.OC- Outcome Delivery Incentives IAP Response.**

### Column 15 Marginal cost

*Provide the exact marginal cost estimate used in the calculation of the standard ODI underperformance incentive rate. This estimate should be presented in the measurement unit described (£ per unit per household, 2017-18 CPIH deflated, financial year average).*

**The marginal cost reported is the equal to the value in App1.**

### Column 16 Number of households

*Provide the exact number of households assumed used to convert the marginal benefit and marginal cost estimates (which are per household values) into aggregate values for incentive rate calculation purposes.*

### Column 17 Totex sharing rate (customer share)

*Enter the customer share of expenditure performance, from the totex efficiency sharing incentive, used to calculate the standard ODI incentive rates (where applicable).*

*Our expectation is that companies should use 50% for the customer share of expenditure performance unless sufficient evidence is provided to justify the selection of a different percentage. Note that the residential retail, business retail in Wales and bioresources price controls do not have cost sharing because they are based on average revenue controls. In these cases, companies may wish to set the totex sharing rate to 0%, as customers bear no share of cost overspending.*

**We have applied Ofwat's 50% sharing rate.**

**Column 18 Type of ODI rate formula**

*Select the appropriate type of ODI rate formula from the drop-down list provided. For details of the standard ODI underperformance incentive rate formula, refer to Appendix 2 page 91 of the PR19 final methodology (hyperlink below).*

This column notes the type of ODI rate formula used.

**Column 19 Reason for using alternative formula (where applicable)**

*If the standard ODI underperformance incentive rate formula has been used to calculate the standard ODI underperformance incentive rate, leave blank. Otherwise, select a reason for deviation from the standard formula.*

This column notes the reason for using an alternative formula.

**Column 20 Alternative formulae (where applicable)**

*If an alternative approach has been used to calculate the standard ODI underperformance incentive rate, the company should provide a breakdown of the calculation used.*

This column outlines the alternative formula used. Further information on the calculation of out ODI rates is outlined in 5.5 PR19 Outcome Delivery Incentives and B2.4.WSH.OC Outcome Delivery Incentives IAP response.

**Column 21 Chosen underperformance payment standard incentive rate**

*Provide the standard ODI underperformance incentive rate that the company proposes to apply in AMP7 (2020-25).*

This column notes the chosen ODI underperformance rate. The values are consistent with App1.

**Column 22 Standard formula underperformance penalty incentive rate**

*This column applies the standard ODI underperformance incentive rate formula to calculate a standard ODI underperformance incentive rate. The output should match column 21 if the company has chosen to use the standard ODI underperformance incentive rate formula.*

Calculated cell.

**Column 23 Reason(s) for any differences between columns 21 and 22 (where applicable)**

*This column should be used to explain any differences between the values shown within columns 21 and 22 (where applicable).*

*If a difference exists because the company has not applied the standard ODI underperformance incentive rate formula, enter "Alternative to standard formula used". Otherwise, enter an appropriate explanation for the differences observed.*

This column provides any reason for differences in our chosen underperformance rate and the standard formula. We deviate from the standard methodology for several of our ODIs as the marginal cost is greater than the marginal benefit and as a result we get a positive ODI rate for underperformance payments.

**Column 24 Reason(s) for any differences between ODI rate in this table and table App1**

*Explain the reasons for any differences between the standard ODI underperformance incentive rate in column 21 and the standard ODI underperformance incentive rate from the App1 table.*

Our ODI rates are consistent with App1 and therefore this column is blank.

**Column 25 Type of ODI rate formula**

*Select the appropriate type of ODI rate formula from the drop-down list provided. For details of the standard ODI outperformance incentive rate formula, refer to Appendix 2 page 91 of the PR19 final methodology (hyperlink below).*

This column notes the type of ODI rate formula used.

**Column 26 Reason for using alternative formula (where applicable)**

*If the standard ODI outperformance incentive rate formula has been used to calculate the standard ODI outperformance incentive rate, leave blank. Otherwise, select a reason for deviation from the standard formula.*

This column notes the reason for using an alternative formula.

**Column 27 Alternative formulae (where applicable)**

*If an alternative approach has been used to calculate the standard ODI outperformance incentive rate, the company should provide a breakdown of the calculation used.*

This column notes the reason for using an alternative formula.

**Column 28 Chosen outperformance payment incentive rate**

*Provide the standard ODI outperformance incentive rate that the company proposes to apply in AMP7 (2020-25).*

This column notes the chosen ODI outperformance rate. The values are consistent with App1.

**Column 29 Standard formula outperformance payment incentive rate**

*This column applies the standard ODI outperformance incentive rate formula to calculate a standard ODI outperformance incentive rate. The output should match column 28 if the company has chosen to use the standard ODI outperformance incentive rate formula.*

Calculated cell.

**Column 30 Reason(s) for any differences between columns 28 and 29 (where applicable)**

*This column should be used to explain any differences between the values shown within columns 28 and 29 (where applicable). If a difference exists because the company has not applied the standard ODI outperformance incentive rate formula, enter "Alternative to standard formula used". Otherwise, enter an appropriate explanation for the differences observed.*

This column provides any reason for differences in our chosen underperformance rate and the standard formula. Several of our ODI rates are different to the standard formula as our ODIs have been set to be consistent with Ofwat's lower bound. Further information on our approach to setting ODI rates is included in 5.5 PR19 Outcome Delivery Incentives and B2.4.WSH.OC Outcome Delivery Incentives IAP response.

**Column 31 Reason(s) for any differences between the ODI rate in this table and table App1**

*Explain the reasons for any differences between the standard ODI outperformance incentive rate in column 28 and the standard ODI outperformance incentive rate from the App1 table.*

Our ODI rates are consistent with App1 and therefore this column is blank.

**Other standard ODI rates**

**Column 32 Other standard ODI rates proposed by the company**

*If one standard underperformance incentive rate and/or one standard outperformance incentive rate has been proposed, leave blank. If additional standard ODI rates have been proposed for either underperformance or outperformance in table App1 (column references: 97 and 101), the company should confirm that these additional rates are formed on the same basis as the entries in columns 21 and 28 in table App1a by entering the text 'Additional rates are formed on the same basis'.*

*If additional standard ODI rates in table App1 have been calculated differently from the entries in column 21 or column 28, provide explanation for the differences in this column and through additional written commentary.*

This column is blank as we have not proposed any other standard ODI rates.

## App1b guidance and line definitions

### Overview

The table does not lend itself to a line by line commentary so we have provided a summary commentary by column. The values reported in this table are the same as App1 apart from the units for Water Supply Interruptions which have been reported in hrs:mins:secs.

### Pre Populated Columns from APP1

Column 1 Unique ID

Column 2 Outcome

Column 3 PC history

Column 4 PC ref. (company)

Column 5 PC name

Column 6 PC short description

Column 7 Price control allocation (%)

Column 15 Price control allocation (Total)

Column 16 ODI type

Column 17 ODI form

Column 18 ODI timing

Column 19 Primary category

Column 20 PC unit

Column 21 PC unit description

Column 22 Decimal places

Column 23 Direction of improving performance

Column 24 Common performance commitment

Column 25 Unit

*Please follow table App1 guidance, but for the supplemental measurement unit*

Replicated from App 1.

Column 26 Unit description

*Please follow table App1 guidance, but for the supplemental measurement unit*

Replicated from App 1.

Column 27 Decimal places

*Please follow table App1 guidance, but for the supplemental measurement unit*

Replicated from App 1.

Column 28 Direction of improving performance

*Please follow table App1 guidance, but for the supplemental measurement unit*

Replicated from App 1.

Column 29 2020-25 performance commitment levels

*Please follow table App1 guidance, but for the supplemental measurement unit*

Replicated from App 1.

Column 34 Longer-term projections

*Please follow table App1 guidance, but for the supplemental measurement unit*

Replicated from App 1.

## Welsh Water Appointed Business Tables Commentaries

Column 50 Financial ODI indicator

*Please follow table App1 guidance, but for the supplemental measurement unit*

Column 55 Enhanced underperformance penalty collar

*Please follow table App1 guidance, but for the supplemental measurement unit*

Replicated from App 1.

Column 60 Standard underperformance penalty collar

*Please follow table App1 guidance, but for the supplemental measurement unit*

Replicated from App 1.

Column 65 Underperformance penalty deadband

*Please follow table App1 guidance, but for the supplemental measurement unit*

Replicated from App 1.

Column 70 Outperformance payment deadband

*Please follow table App1 guidance, but for the supplemental measurement unit*

Replicated from App 1.

Column 75 Standard outperformance payment cap

*Please follow table App1 guidance, but for the supplemental measurement unit*

Replicated from App 1.

Column 80 Enhanced outperformance payment cap

*Please follow table App1 guidance, but for the supplemental measurement unit*

Replicated from App 1.

Column 85 Standard underperformance penalty incentive rates

*Please follow table App1 guidance, but for the supplemental measurement unit*

Replicated from App 1.

Column 88 Enhanced underperformance penalty incentive rate

*Please follow table App1 guidance, but for the supplemental measurement unit*

Replicated from App 1.

Column 89 Standard outperformance penalty incentive rates

*Please follow table App1 guidance, but for the supplemental measurement unit*

Replicated from App 1.

Column 92 Enhanced outperformance penalty incentive rate

*Please follow table App1 guidance, but for the supplemental measurement unit*

Replicated from App 1.

Pre Populated Columns from APP1

Column 93 Standard ODI calculation

Column 94 Standard ODI operand

Column 95 Standard ODI operand note

Column 96 Maximum enhanced underperformance penalties

Column 102 Maximum standard underperformance penalties

Column 108 Maximum standard outperformance payments

Column 114 Maximum enhanced outperformance payments

## Welsh Water Appointed Business Tables Commentaries

Column 120 P10 underperformance penalties

Column 126 P10 associated performance commitment levels

*Please follow table App1 guidance, but for the supplemental measurement unit*

Replicated from App 1. Except for Water Supply Interruptions row 2 where the figures are different from App 1.

Column 131 P90 outperformance payments

Pre Populated Column from App1.

Column 137 P90 associated performance commitment levels

*Please follow table App1 guidance, but for the supplemental measurement unit*

Replicated from App 1. Except for Water Supply Interruptions row 2 where the figures are different from App 1.

## App2 – Leakage additional information and old definition reporting

### Overview

The proposed investment in AMP7 is designed to meet the sustainable economic level of leakage (SELL) and to deliver the Ofwat challenge of a 15% reduction in total leakage by the end of AMP7. This is equivalent to a reduction of 26 MI/d from our end of AMP6 forecast leakage rate of 169 MI/d to a value of 143 MI/d by the end of the AMP7 period. We are proposing a series of innovative initiatives to achieve this. The initiatives build upon the ongoing leakage reporting convergence work which will provide a step change in our understanding and delivery of leakage reduction, as further discussed in our 5.8J leakage improvement investment case.

To provide further context, the SELL assessment should be viewed as a range given the level of uncertainty within the analysis. Our appraisal has determined that the economic point is a value between 15% and 20%. The achievement of 15% will require a significant change in working methods and technology, therefore we have deemed this target to be appropriate until we better understand the deliverability of our new strategies. Our plan will include a greater focus than ever before on customer side losses tackling leaking pipes and appliances within households through our Project Cartref programme. Further information on the Cartref programme can be found in our 5.8J leakage improvement investment case and draft WRMP

Historically the focus of leakage delivery has been on pro-active "find and fix" activity in the distribution system as this was seen as the biggest component contributing to the high volumes of leakage present. If we continue to focus on local distribution system leakage (mains and communication pipes) we would need to achieve a component reduction of about 27% in order to reduce total leakage by 15%. We consider this to be cost beneficial use of customer money and therefore we must both modify our approach and also seek reductions in upstream leakage and customer side leakage. To achieve the required volume, we have forecast a 10% reduction in each of the three components of total leakage (trunk mains, distribution and supply side) over AMP7.

Leakage in AMP7 will also be reported in line with the consistency of reporting definitions for key performance measures that have been introduced by Water UK so that comparisons between companies can be made more easily.

### Line 1 Leakage region 1 or whole company

We have completed the table at a Whole Company level as this is the level of detail we report within the business.

### Line 2 Upper limit of sustainable economic level of leakage (SELL)

*The upper limit of the economic range calculated for SELL. The upper and lower bounds should reflect the reliability of data, key uncertainties and assumptions used to calculate the SELL. We would expect it to reflect different key assumptions used for weather and other external influences.*

This reflects an 8.70 MI/d upper limit to Central point of sustainable economic level of leakage (SELL) (App2 Line3). This is added onto Line 3 forecasts across the plan horizon. This represents the Uncertainty range as determined using Monte Carlo assessment of the input variables underpinning the current SELL assessment.

### Line 3 Central point of sustainable economic level of leakage (SELL)

*The central point of the economic range calculated for SELL.*

This is consistent with the SELL glide path used within the Revised Draft WRMP19. Yr 4 and 5 of AMP6 reflect the prior SELL assessment used within the Final WRMP14 and PR14 which is also used within the Revised Draft WRMP19 for AMP6 or pre-plan years.

AMP7 represents an updated SELL assessment incorporating the PR19 15% Leakage reduction commitment across the AMP. The company has considered more challenging AMP7 leakage reductions profiles but has chosen a minimum 15% reduction as the baseline position in accordance with its sustainable economic level of leakage assessment.

Beyond AMP7 the company has also set a longer term vision to reduce Total Leakage to 10% of base year Distribution Input by 2050. This profile is reflected within Line 3 of App2 with Total Leakage reducing to 85.0 MI/d by 2044-45 from 143.0 MI/d at the end of AMP7.

The impacts of leakage consistency has been considered within this assessment and will result in no change to the leakage reduction profiles across the horizon. These will remain as the SELL glide path reported. Convergence impacts will be offset by Yr1 AMP7 and the SELL glide path resumed.

#### Line 4 Lower limit of sustainable economic level of leakage (SELL)

*The lower limit of the economic range calculated for SELL. The upper and lower bounds should reflect the reliability of data, key uncertainties and assumptions used to calculate the SELL. We would expect it to reflect different key assumptions used for weather and other external influences*

This reflects an 8.90 MI/d lower limit to Central point of sustainable economic level of leakage (SELL) (App2 Line3). This is deducted from Line 3 forecasts across the plan horizon. This represents the Uncertainty range as determined using Monte Carlo assessment of the input variables underpinning the current SELL assessment.

#### Line 5 WRMP leakage targets

*The leakage targets set out in the WRMPs. This should companies forecast of their total leakage in MI/d consistent with line 40FP in the FP Demand tab of the WRMP data tables.*

The company does not produce different leakage glide paths for purpose of SELL and the WRMP. Line 5 is therefore consistent with Line 3. Line 3 (SELL) is used as a component of the demand forecasts and the production of Distribution Input as part of producing the revised draft demand forecasts and WRMP19.

#### Line 6 Leakage/property/day

*Leakage per property per day based on the new calculation method*

Number has been calculated based on Line 3 and total connected properties (WS3 Line 8) this complies with the new calculation method.

#### Line 7 Leakage/km of main/day

*Leakage per km of main per day calculated using the new approach to calculating leakage*

Number has been calculated based on Line 3 and forecasts of mains lengths (WN2 Line 1).this complies with new approach to calculating leakage.

#### Line 8 Total connected properties at year end

*Total connected properties at year end.*

*For companies submitting leakage data for more than one region, this is the total connected properties at year end for the individual region. When added together, the regional totals should reconcile with the total in table WS3 line 8.*

*For companies submitting leakage data for one region only this is the total connected properties at year end, as reported in table WS3 line 8.*

**We have copied the relevant data lines from our previously submitted table WS3 Line 8**

#### Line 9 Total length of potable mains as at 31 March

*"Total length of potable mains as at 31 March.*

*For companies submitting leakage data for more than one region, this is the total length of potable mains as at 31 March for the individual region. When added together, the regional totals should reconcile with the total in table Wn2 line 1.*

*For companies submitting leakage data for one region only this is the total length of potable mains as at 31 March, as reported in table Wn2 line 1."*

**We have copies the relevant data lines from our previously submitted table WN2 line 1.**

#### Line 30 Leakage

*Average annual leakage based on the approach used in PR14 to calculate leakage. This is required to understand the differences in performance reporting between the new consistent approach and the old approach*

The data reported in this line is equivalent to that reported in line 3 as we have taken into account the convergence requirements for this measures.

#### Line 31 Central Point of Sustainable economic level of leakage (SELL)

*The central point of the economic range calculated for SELL using the old definition of leakage*

The data reported in this line is equivalent to that reported in line 5. New definition reporting is forecast to have zero net effect on the reported leakage, so our SELL assessment remains constant.

#### Line 41 Per capita consumption (PCC)

*Companies should report per capita consumption using the old definition (note: the PCC definition may be updated following the joint project with Water UK to improve the consistency of the definitions of a number of common performance commitments)*

This is consistent with 'Normal Year' Household Consumption and Household Population forecasts used within the Revised Draft Demand Forecast and WRMP19. This excludes Supply Pipe Leakage which is considered as part of the Total Leakage Target (Line 3 and Line 5). The forecasts reflect metering policies and water efficiency strategies which will reduced PCC.

2015-16, 2016-17 and 2017-18 are as reported in the APR 4a line 2 which is different due to convergence measures implementation which were reported as shadow measures in the 17-18 Apr table 3S. The forecast data align with our targets for the performance commitment based on the new definition, we believe that when the convergence project is completed the old and new definitions will align

#### Line 42 PR14 Measurement of Supply Interruptions (Old Definition)

*Companies should report one supply interruption metric – it should be the PR14 performance commitment that is closest to the new consistent definition for supply interruptions or another metric which the company has been collecting, perhaps for Discover Water, if this is closer to the new consistent definition. We expect companies to report this data against the most appropriate number of decimal places given the metric that they are reporting.*

We have used the PR14 MOS A3 Reliability of Supply, the data in this line reflects our Business Plan for AMP6 and the profile of our target for AMP7. More information about our projected performance is available in 5.2 PR19 Performance Commitments.

#### Line 43 PR14 measurement of internal sewer flooding incidents (Old Definition)

*Companies should report one internal sewer flooding metric – it should be the PR14 performance commitment that is closest to the new consistent definition for internal sewer flooding or another metric which the company has been collecting, perhaps for Discover Water, if this is closer to the new consistent definition. We would expect this to include flooding related to existing/legacy network flooding and transferred network. We expect companies to report this data against the most appropriate number of decimal places given the metric that they are reporting.*

## Welsh Water Appointed Business Tables Commentaries

We have used the PR14 MOS D3 Properties Flooded Internally in the Year, the data in this line reflects our Business Plan for AMP6 and the profile of our target for AMP7. More information about our projected performance is available in 5.2 PR19 Performance Commitments.

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

### Introduction

Within Ofwat's "Delivering Water 2020" (Delivering Water 2020: Our final methodology for the 2019 price review. Appendix 2: Delivering outcomes for customers), the Abstraction Incentive Mechanism (AIM) encourages water companies to reduce the environmental impact of abstracting water at environmentally-sensitive sites during defined periods of low surface water flows. The AIM is a reputational incentive which seeks to harness a water company's aspiration to enhance its reputation by demonstrating that it is changing its abstraction practices in a way that benefits the water environment.<sup>1</sup>

### Considering AIM for our sites

The AIM should be considered within the context of the operation of our water resource systems and the wider environmental obligations and drivers that impact and control the abstraction of water from our river sources. The objective of AIM being to reduce abstraction at sites where this could lead to environmental improvement, this through the increased use of alternative sources which are less environmentally impactful but where this change of operation may cause increased operational cost.

The abstractions from rivers and streams fall into two broad categories; those that are single source feeds into water treatment works and those within conjunctive use systems. For the first category there are no alternative sources and so these can be discounted from AIM. In the second category, the alternative sources to river abstraction are predominantly upland reservoir sources. We use these upland sources in preference to our pumped lowland intakes as these are cheaper sources. Our cheaper sources are therefore ones that have a lower impact on river flows.

In terms of environmental impact of abstractions, we have been working with Natural Resources Wales (NRW) and other stakeholders over the past three AMP periods to examine where rates of abstraction may not be sustainable and to review our operation against European environmental directives. The result has been an extensive programme of investigations and implementation of schemes many of which have resulted in variation to abstraction licences.

Table 1 below outlines the twenty one abstraction licences that we have modified to remove their risk of environmental impact upon European protected Special Areas of Conservation (SAC) as designated under the Habitats Directive. The level of environmental protection set is extremely high, given the sensitivity of the aquatic species present to changes in river flow. Any potential for our abstractions to cause a negative impact has now been removed through detailed environmental assessment and careful, and in many cases complex, changes to abstraction licence conditions. AIM would not further benefit these sites and any changes to abstractions at these sites would require further Habitats Regulation Assessment.

In addition, NRW have looked at all of our abstraction sites across Wales to understand whether their operation is impacting on Water Framework Directive (WFD) obligations. We undertook a number of detailed environmental investigations during AMP6 but due to the extent of the Habitats Directive driven implementation very few additional sites have been raised through either NRW's National Environment Programme (NEP) or the EA's Water Industry National Environment Programme (WINEP) where further implementation schemes are needed in AMP7. In fact, none of these require changes to river abstraction. Table 2 details WFD driven schemes for delivery in AMP7. The conclusion is that in operating to our existing abstraction licences at our river sites, our current operations are environmentally sustainable in relation to current evidence.

<b>Licence</b>	<b>Driver</b>	<b>Implementation Date</b>
<b>River Wye at Broomy Hill</b>	Entrainment	November 2014
<b>River Wye at Monmouth (Wye Transfer)</b>	Flow	April 2018
	Entrainment	December 2017
<b>River Wye at Monmouth (Mayhill)</b>	Flow	April 2018
	Entrainment	December 2017
<b>River Lugg at Byton</b>	Flow	November 2014
<b>Pilleth Boreholes</b>	Flow	May 2015
<b>Dunfield Boreholes</b>	Flow	May 2015
<b>Midsummer Meadow</b>	Flow	May 2015
<b>River Usk at Llantrisant</b>	Flow and Entrainment	December 2018
<b>River Usk at Brecon</b>	Flow and Entrainment	July 2017
<b>Brecon Boreholes</b>	Flow	July 2017
<b>River Usk at Rhadyr (Prioress Mill)</b>	Flow and Entrainment	December 2018
<b>Eastern Cleddau at Pont Hywel</b>	Flow	March 2019
<b>Western Cleddau at Crowhill</b>	Flow	March 2019
	Entrainment	January 2019
<b>Eastern Cleddau at Canaston</b>	Flow	March 2019
	Entrainment	January 2018
<b>Afon Teifi at Llechryd</b>	Entrainment	January 2018
<b>Afon Tywi at Nantgaredig</b>	Flow and Entrainment	December 2018
<b>Afon Tywi at Manorafon</b>	Entrainment	January 2018
<b>Llyn Cwellyn</b>	Fish passage	May 2017
<b>Llyn Eiddew Mawr</b>	Water level	May 2017
<b>Llyn Morwynion</b>	Water level	May 2017
<b>Llwyn Isaf borehole</b>	Groundwater level	November 2010

Table 1 - Habitats Directive Environmental Outcomes

	<b>Water body</b>	<b>Welsh Water Asset</b>	<b>Improvement required</b>
<b>NEYM</b>	Llyn Cefni Afon Cefni - to Cefni Reservoir	Cefni reservoir	“No regrets” compensation flow
<b>SEWCUS</b>	Afon Taf Fawr - source to conf Taf Fechan	Llwynon reservoir Cantref reservoir Beacons reservoir Pontsticill reservoir	Sediment management  “Flushing” flow
<b>SEWCUS</b>	Caerfanell - source to conf R Usk Talybont Reservoir	Talybont reservoir Nant Clydach intake	Ensure flow immediately below the dam Sediment management
<b>SEWCUS</b>	Bettws-Malpas Brook	Pant yr Eos reservoir Ynys y Fro reservoir Henllys intake	“No regrets” residual flow
<b>SEWCUS</b>	Shon-Sheffreys Reservoir Sirhowy R - source to Rock Villas	Shon Sheffrey	Increased compensation flow
<b>SEWCUS</b>	Grwyne Fawr - source to conf Grwyne-Fechan	Grwyne reservoir	Formalisation of compensation flow
<b>SEWCUS</b>	Castell Nos Reservoir Lluest-wen Reservoir Afon Rhondda Fach - source to conf Rhondda R	Castell Nos reservoir Lluest wen reservoir	“No regrets” compensation flow Sediment management
<b>SEWCUS</b>	Unnamed tributary - source to conf Rhymney R	Nant Fawr intake	“No regrets” residual flow

*Table 2–WFD Summary of improvements*

The WINEP provided to us by the Environment Agency for PR19 only identified one abstraction site for implementation in AMP7 namely, Leintwardine boreholes (impact upon River Teme). The Leintwardine boreholes provide all of the local supply in this area with very limited support available from other sources. This site would only be considered for AIM if an alternative water resource could be used and this is not currently the case.

#### Alternative Welsh Water Sites

In reviewing our abstraction sites, we are only aware of one where environmental concerns remain that are not covered through our AMP5-7 environmental assessment and implementation programme. Our Vowchurch zone is fed from a series of shallow boreholes adjacent to the River Dore. The site was the subject of a Restoring Sustainable Abstraction (RSA) study in 2010-11 which concluded that at current abstraction levels there was no detrimental impact to the environment, but there could be if abstraction rates were to increase. Analysis for our draft WRMP19 indicated the yield of the boreholes could be significantly reduced under a severe drought event and so we are proposing a scheme for AMP7 that will enable the transfer of potable water from our Hereford zone to meet the Vowchurch demand. Once this scheme is delivered then this would be a suitable candidate site to apply the AIM.

**This assessment reinforces the view from Ofwat in their 2016 AIM Guideline that:**

No water company wholly or mainly in Wales has proposed an AIM site, and the environmental information we currently have does not suggest there is a need for them to do so. We therefore expect the AIM will apply only to water companies wholly or mainly in England. However, if a water company wholly or mainly in Wales chose to volunteer an AIM site we would expect that company to follow these AIM guidelines. (Guidelines on the abstraction incentive mechanism: Ofwat, February 2016)

#### **Stakeholder Engagement**

We have confirmed with Natural Resources Wales that for AMP7 we do not have any suitable sites for AIM but will continue to review and include in AMP8 if worthwhile. In discussion with the Environment Agency over our proposed scheme for Vowchurch, they have agreed that this could have the potential to become an AIM site in AMP8 once it is delivered. We would follow the AIM guidelines in this case.

## App4 – Customer metrics – We have replaced the whole commentary for this table due to the number of additional lines and other changes.

The App4 table demonstrates the relevant customer metrics regarding affordability and vulnerability for years 2013-14 to 2024-25. In this table 2013-14 to 2017-18 are historical actuals, 2018-19 and 2019-20 are blind years and 2021 to 2025 are forecast.

The information contained in this table is provided in more detail in supporting document 1.1I PR19 Customer Engagement: Acceptability testing.

### Section A – Affordability

Line 1 Customers finding the level of their water bills affordable: (a) for companies who charge for water only (WoCs)

*Customers finding the level of their bills affordable: (a) for companies who charge for water only (WoCs), the customers who agree that the water charges that they pay are affordable to them in real terms, as a percentage of all customers surveyed.*

This line is not applicable to us and has therefore been left blank.

Line 2 Customers finding the level of their combined bills affordable: (b) for companies who charge for both water and wastewater (WaSCs)

*Customers finding the level of their bills affordable: (b) for companies who charge for both water and wastewater (WaSCs), the customers who agree that the water and wastewater charges that they pay are affordable to them in real terms, as a percentage of all customers surveyed.*

Data in this line has come from two sources: CCWater surveys provided the input from 2013-14 to 2016-17 and Welsh Water's Acceptability Phase 2 research has provided the input from 2017-18 to 2024-25. The CCWater survey and our survey, although representing the same line of data have different methodologies. This means that years 2013-14 to 2016-17 using the CCWater report and years 2017-18 to 2024-25 using our report are not comparable due to methodology differences; which include that the method of completion is different, question responses are coded differently and different numbers of customer engaged.

There is an 8% increase in affordability between 2013-14 and 2016-17 (CCWater Water Matters Report). There is then a significant rise in figure to 96% in 2017-18 using our Acceptability testing phase 2 survey results. This figure then decreases by 2% for 2018-19 to 2024-25.

Business retail customers' data was not available for the years 2013-14 to 2016-17. The 2017-18 to 2024-25 figures therefore are the same for all years and taken from the 2017-18 Acceptability Phase 2 research results.

Further information on the development and undertaking of the customer research programme can be found in supporting information 1.1C PR19 Customer Engagement: Bills research.

Line 3 Customers finding the level of their combined bills affordable: (c) for companies who charge for water only (WoCs)

*Customers finding the level of their bills affordable: (c) for companies who charge for water only (WoCs), the customers who agree that the water and wastewater charges that they pay are affordable to them in real terms, as a percentage of all customers surveyed.*

This line is not applicable to us and has therefore been left blank.

Line 4 Customers finding their water bills acceptable: (a) for companies who charge for water only (WoCs)

*Customers finding their bills acceptable: (a) for companies who charge for water only (WoCs), customers who agree that their water bill is acceptable when considering the price (in real terms) and service package together, as a percentage of all customers surveyed.*

This line is not applicable to us and has therefore been left blank.

~~Line 5 Customers finding their combined bills acceptable: (b) for companies who charge for both water and wastewater (WaSCs)~~

~~*Customers finding their bills acceptable: (b) for companies who charge for both water and wastewater (WaSCs), customers who agree that their water and wastewater bill is acceptable when considering the price (in real terms) and service package together, as a percentage of all customers surveyed.*~~

~~Household customer data for years 2013-14 and 2014-15 is not available for AMP5 acceptability and so this is assumed to be the same as the known figure in 2015-16.~~

~~Business customer views were captured in the Welsh Water Acceptability Phase 2.~~

~~Business customer data before 2017-18 is not known and so each year is assumed to be the same as the known 2017-18 figure.~~

~~Residential and Business customers' acceptability figure from the PR19 research has been used for all years between 2020-21 and 2024-25 and PR14 survey data has been used for 2013-14 to 2019-20. Both PR14 and PR19 surveys included the same question, however the method in which customers have been engaged is different.~~

~~Further information on the development and undertaking of the customer research programme can be found in supporting information 1.1C PR19 Customer Engagement: Bills research.~~

~~Line 6 Customers finding their combined bills acceptable: (c) for companies who charge for water only (WoCs)~~

~~*Customers finding their bills acceptable: (c) for companies who charge for water only (WoCs), customers who agree that their water and wastewater bill is acceptable when considering the price (in real terms) and service package together, as a percentage of all customers surveyed.*~~

~~This line is not applicable to us and has therefore been left blank.~~

~~Line 7 Benefits of applying affordability assistance measures~~

~~*Benefits of applying affordability assistance measures. By this we mean the aggregate benefits that would be used in a cost benefit assessment. By affordability assistance measures we mean any measure that a company provides to assist customers to pay their bill. It is not confined to, for example, social tariffs.*~~

~~We have assessed the benefits of applying affordability assistance measures as the financial (cost reducing-income increasing) impact of the social assistance schemes we offer to our residential customers. This benefit directly correlates to the volume of customers we offer social assistance schemes to. The benefits derived from offering these schemes is to the reduction of bad debt as a result of customers increasing the proportion of bill paid which directly impacts the doubtful debt charge.~~

~~In order to calculate the 2017-18 benefits of applying affordability assistance measures we have analysed historic data regarding the improvements in customer collection rates. The improvements in rates differ per tariff, for instance a customer moving to a direct payment agreement (DWP) on average increases their rate of payment by 38% versus their rate of payment prior to joining the tariff. We are able to look back over the last 3 years data in order to project the future improvements in collections rates. Whilst the specific improvement in rates differ by tariffs, historic data shows us that the improvement in payment rates is relatively static per tariff across time which gives us confidence in projecting these rates into AMP7. We have outlined a number of scenarios of these benefits in the table below;~~

	<b>Non-Payer Prior to Tariff—Non Payer after Tariff</b>	<b>Non-Payer Prior to Tariff—Less than Payer after Tariff</b>	<b>Non-Payer Prior to Tariff—Full Payer after Tariff</b>	<b>Less than Full Payer Prior to Tariff—Less than Payer after Tariff</b>
<b>Bill Reduction;</b>	Reduce Provision (Bill—Tariff Discount)	Reduce Provision (Bill—Tariff Discount)	Reduce Provision (Bill—Tariff Discount)	Reduce Provision (Bill—Tariff Discount)
<b>Collections Rate;</b>	No provision reduction, no increase in payment rate	Reduce Provision (translate increase % of bill paid into value—100% reduction)	Reduce Provision (translate increase % of bill paid into value—100% reduction)	Reduce Provision (translate increase % of bill paid into value—less prior value payment)

There is also a benefit of reducing the debt management activity with these customers as a result of more affordable bills. In order to calculate the 2017-18 benefits of reduced collections activity required for social tariff customers we have analysed the historic percentage of these tariff customers that move from non-payers or customers not meeting payment arrangements to actively paying customers. For each customer in debt there are a range of activities that can occur, we have average the total number of touch points per customer in 2016-17 and 2017-18 which has enabled us to estimate the annual reduction in debt management activity required on this cohort of customers, where this has enabled us to reduce the number of FTE focused on this area of debt management the benefit includes the cost saving of FTE reductions.

We have taken aggregate benefits for 2017-18 to imply future benefits of customers on the social assistance as at the 31<sup>st</sup> March 2018, which sum the following items;

- Reduction in doubtful debt provision as a result of a reduced water bill, this is the difference between the current customers pre social tariff and social tariff water bill for 2017-18 and each subsequent year in AMP6 and AMP7. Each year value is discounted using our prescribed discount rate of 2.9%.
- Reduction in doubtful debt provision as a result of an average increase in collection rates, this is the difference between the current customers pre social tariff collection rate and collection rate on the assistance tariff for 2017-18 and each subsequent year in AMP6 and AMP7. Each year value is discounted using our prescribed discount rate of 2.9%.
- The FTE saving generated annually as a result of less debt management activity associated with customer on social assistance schemes. The future benefits of these saving are discounted using our prescribed discount rate of 2.9%.

We currently only offer affordability assistance to residential customers, hence business customers have zero cost or benefit of affordability measure.

#### Line 8 Costs of applying affordability assistance measures

*Costs of applying affordability assistance measures. By this we mean the aggregate costs that would be used in a cost benefit assessment. By affordability assistance measures we mean any measure that a company provides to assist customers to pay their bills. It is not confined to, for example, social tariffs. The costs include revenue foregone and operating expenditure (Opex) costs.*

We have assessed the costs of applying affordability assistance measures as the financial (cost increasing income reducing) impact of the social assistance schemes we offer to our residential customers. The costs derived from offering these schemes is the operational cost of our customer service and debt management affordability teams. There is also a cost of revenue foregone as a result of offering a reduced or capped bill for these customers which is included in these figures.

We have taken aggregate costs for 2017-18 to imply future costs of customers receiving assistance as at the 31st March 2018, which sum the following items;

- The revenue foregone is the amount of revenue below the revenue control allowance that is not collected as a result of offering reduced tariffs for customers who struggle to pay their bills for 2017-18 and each subsequent year in AMP6 and AMP7. Each year value is discounted using the prescribed discount rate of 2.9%.
- The operational manpower associated with processing and managing the customers on social assistance schemes. The future cost of these staff are discounted using the prescribed discount rate of 2.9%.

We currently only offer affordability assistance to residential customers, hence business customers have 0 cost or benefit of affordability measure.

#### Line 9 Customers aware of affordability assistance measures

*Customers aware of affordability assistance measures: customers who are aware of any affordability assistance measures offered by a company for customers who struggle to afford their bills as a percentage of all customers. By affordability assistance measures we mean any measure that a company provides to assist customers to pay their bills. It is not confined to, for example, social tariffs.*

Data for years 2012-13 to 2017-18 has been taken from the CCWater "Water Matters." They are seven-year rolling averages. The seven-year trends are assessed using the Mann-Kendall method (Mann 1945, Kendall 1975). The Mann-Kendall analysis is applied to exponentially smoothed, transformed data rather than the raw data.

The CCWater survey only asks about Welsh Water Assist / WaterSure Wales not the broader range of affordability assistance measures. This data is the nearest proxy data we have to represent previous years.

We have forecast an increased awareness by 1% in each future year to align with our Social Tariff strategy to increase the number of customer on social tariffs to c150,000 people by 2025. This is not a detailed forecast.

Business-Retail customer data is not included for this line as it is not applicable to this customer group.

#### Line 10 Customers who are in debt who have a repayment plan

*Customers who are in debt who have a repayment plan: customers who are in arrears with their charges and who have a payment plan agreed with their water company, as a percentage of all customers who are in arrears with their charges. To define "customers who are in debt" companies should use customers with debt outstanding for more than 30 days, which is consistent with the RAG 2.07 table 2.6.1 definition of debt management.*

*Companies should explain in their business plan commentary when and how they are measured (for example, whether they have used the number of customers on 31st March of each year, or the average number of customers in each year).*

and

#### Line 11 Customers who have a repayment plan and who are continuing to pay

*Customers who have a repayment plan and who are continuing to pay: customers who are in arrears with their charges and who have a payment plan agreed with their water company and who have continued to make payments, as a percentage of all customers who are in arrears with their charges. 'Continue to pay' means the customer making regular payments, even when they are a lower amount than their normal bill payments would be.*

*To define "customers who are in arrears with their charges" companies should use customers with debt outstanding for more than 30 days, which is consistent with the RAG 2.07 table 2.6.1 definition of debt management.*

*Companies should explain in their business plan commentary when and how they are measured (for example, whether they have used the number of customers on 31st March of each year, or the average number of customers in each year).*

Actual Data is available in our debt management (Tallyman) system for years 2014-15 to 2017-18. Data is unavailable for 2013-14, as we moved to our current debt system in 2015. The values shown for 2013-14 is therefore assumed equal to 31 March 2015 for the purpose of table completeness. Data for all years is based on the number of arrears customers with a repayment plan at the year-end date of 31 March.

Our forecast is based upon a business commitment to improve the collection rate of debt across all customer types during the remaining AMP6 and into AMP7. This forecast movement in this rate is a linear function of historical performance which results on a repayment rate on debt agreements in line with our doubtful debt forecast.

#### Block B—Vulnerability

##### Line 12 Customers aware of the non-financial vulnerability assistance measures offered

*Customers aware of the non-financial vulnerability assistance measures offered as a percentage of all customers. This includes services offered through the Special Assistance—Priority Service Register (SAR-PSR) and other care services offered.*

Data for years 2012-13 to 2017-18 has been taken from the CCWater “Water Matters.” They are seven-year rolling averages. The seven-year trends are assessed using the Mann-Kendall method (Mann 1945, Kendall 1975). The Mann-Kendall analysis is applied to exponentially smoothed, transformed data rather than the raw data.

We have increased awareness by 2% in each future year to align with our Vulnerable Customer strategy to double the number of customers on our priority services register. This is not a detailed forecast.

Business Retail customer data is not included for this line as it is not applicable to this customer group.

##### Line 13 Customers on Special Assistance Register/ Priority Service Register (SAR/PSR)

*Customers on Special Assistance—Priority Service Register (SAR-PSR)—the number of customers registered on the priority service support scheme on 31st March of each year. Companies should count each individual receiving support; this means there could be more than one customer counted as registered on the priority service support scheme in a property.*

This row aligns to Sv5—Vulnerable customers on priority services register in APP1.

The number of customers signed up to our priority services register grew by nearly 50% between 2012 and 2016. Our Business Plan assumes that registration will double to 52,000 by the end of AMP6 and then grow by 10,000 per annum over AMP7, reaching 100,000 by 2025. This would be comparable with the energy sector.

This increase will be achieved through various means, including:

- improved awareness
- call centre coaching to continue to educate customers about the availability of our priority register
- awareness and training for front line colleagues
- partnering with similar organisations
- Targeted community engagement campaigns.

Customers receiving support with communication, mobility restrictions, supply interruption, security and other needs are all forecast to increase over the period shown for both residential and business customers.

This sums all individuals receiving support. Please note that the sum of lines 15-19 do not equal line 13 because, in line with the above definition, some customers receive more than one service. This

includes where there is more than one individual in a property. This count is as of 31 March each year.

These values vary from MOS numbers presented elsewhere, and this can be attributed to the variation in methods used in the calculation of both values. Calculations for this line utilises the following approach, which varies from the method of calculation used for our MOS values. Firstly, on this occasion we have assumed there to be an increase in the number of disabled customers on the register at a rate of 1% each year. Secondly, in order to meet the definition above, where all household members within receipt of support are counted, we have assumed that our total customer count is 6% higher than the total number of unique customers. Furthermore, in order to differentiate the number of customers in each Ofwat category, we have utilised the % splits from 2017-18, and allocated based on the above assumption regarding the total number of customers on the Priority register.

Business customers receiving support on the priority services register include; customers living in farms or any other multiple property that are registered as “Non household” properties. It will also include Nursing homes, private dialysis centres and hospitals.

	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
<b>MOS (Sv5 APP1)</b>	39,000	52,000	62,000	72,000	82,000	92,000	100,000
<b>APP 4 (Line 13) Residential</b>	<b>38,813</b>	<b>51,751</b>	<b>61,703</b>	<b>71,655</b>	<b>81,607</b>	<b>91,559</b>	<b>99,511</b>
<b>APP 4 (Line 13) Business</b>	<b>187</b>	<b>249</b>	<b>297</b>	<b>345</b>	<b>393</b>	<b>441</b>	<b>489</b>
<b>APP 4 – (Line 13)</b>	39,000	52,000	62,000	72,000	82,000	92,000	100,000

**Line 14 Customers on Special Assistance Register/ Priority Service Register (SAR/PSR)**

*Customers on Special Assistance Priority Service Register (SAR-PSR) – the number of customers registered on the priority service support scheme on 31st March of each year, as a percentage of the population in the company's area. Companies should count each individual receiving support; this means there could be more than one customer counted as registered on the priority service support scheme in a property.*

This is the number of customers identified in Line 13 as a proportion of population served. See above (line 13) for more detail.

**Line 15 Customers receiving services through the SAR/PSR: (a) support with communication**

*Customers receiving services through the SAR-PSR: (a) support with communication, including, but not limited to, alternative format for bills, bespoke or translated communication offerings. Companies should count each individual receiving support; this means there could be more than one customer counted as registered on the priority service support scheme in a property.*

This line covers customers:

- Who are blind or have visual impairments. The support provided includes bills and correspondence being available in large print or braille, audio tape-CD-MP3, as well as reading bills over the phone.
- With hearing or speech impairments. Where the customer has access to a text phone, we offer a Text Relay Service, which is free to use and converts speech into text. Customers are also able to talk to us through Live Chat, Facebook or Twitter.
- With dyslexia or other difficulties understanding the presentation of bills. Bills and correspondence can be provided on alternative coloured paper and font size, to stabilise text. Recite Me is available on our website, which helps make our website more accessible as it allows visitors to our website to customise the way they need it to work for them. This

~~includes text to speech functionality, dyslexia software, an interactive dictionary and a translation tool for many languages. It also provides conventional support for example to make font size large.~~

~~• With learning disabilities. Bills and correspondence may be converted into Easy Read format. In all cases, customers can also choose the nominee scheme, giving consent for someone to act on their behalf.~~

~~Line 16 Customers receiving services through the SAR/PSR: (b) support with mobility and access restrictions~~

~~*Customers receiving services through the SAR-PSR: (b) support with mobility and access restrictions, including, but not limited to, supporting customers who cannot access their water meters or who require a knock and wait service to allow longer time to get to the door.*~~

~~*Companies should count each individual receiving support; this means there could be more than one customer counted as registered on the priority service support scheme in a property.*~~

~~Historical data reveals that there has been a gradual decrease in the number of customers in receipt of mobility and access restriction support via our PSR. Despite this, our projections show that we expect to see a rise in customers in receipt of this support in future years. This trajectory is anticipated as a result of our change in approach to priority services. Until recently our approach has been largely reactive, relying on call centre staff to identify potentially vulnerable customers and inform them of the priority register. Additionally, our marketing of PSR has been limited. We now strive to promote PSR alongside our social tariff schemes, promote greater awareness in our customer facing roles, partner with similar organisations, and utilise other approaches detailed in line 13 above.~~

~~For customers who may have mobility or access restrictions, we are able to support in a number of ways:~~

- ~~• If housebound, we can arrange to visit customers at their home to discuss bills and payments~~
- ~~• A 'knock and wait' service ensures customers have time to get to the door~~
- ~~• So that's customers feel safe in their own homes, our password scheme helps protect from bogus callers who claim to be working for the company. Our PSR and website alerts customers to bogus callers.~~
- ~~• Where necessary, we will arrange alternative supplies of water during a supply interruption~~
- ~~• Where possible, we can relocate a water meter to make it more accessible for customers to read. Alternatively, we can offer to read the meter more frequently.~~

~~For all of the above, awareness and training for our call centre and front line colleagues who may need to visit customers in their home, is essential and will be a continued focus.~~

~~Customers can also choose the nominee scheme, giving consent for someone to act on their behalf.~~

~~Line 17 Customers receiving services through the SAR/PSR: (c) support with supply interruption~~

~~*Customers receiving services through the SAR-PSR: (c) support with supply interruption including, but not limited to, advance notice ahead of a planned supply interruption or emergency water supply during a planned supply interruption for customers with particular medical needs. Companies should count each individual receiving support; this means there could be more than one customer counted as registered on the priority service support scheme in a property.*~~

~~Where customers have a chronic illness or a medical condition that requires a continuous supply of water, for example home dialysis customers, alternative water supplies are provided during a supply interruption. Our response to providing alternative supplies is immediate.~~

~~Wherever we can, we endeavour to use a text (SMS) system to warn of supply interruption. In the event that SMS is not possible, we aim to pre-warn at the door (face to face) and/or over the phone. Customers can choose the nominee scheme, giving consent for someone to act on their behalf.~~

**Line 18 Customers receiving services through the SAR/PSR: (d) support with security**

*Customers receiving services through the SAR-PSR: (d) support with security including, but not limited to, password schemes and identity checks. Companies should count each individual receiving support; this means there could be more than one customer counted as registered on the priority service support scheme in a property.*

Our password scheme helps to protect PSR customers from bogus callers who claim to be working for the company, ensuring that customers feel safe in their own homes. Our PSR and website alerts customers to bogus callers. All relevant colleague ID badges have a dedicated 'Bogus Caller' number included, allowing customers to call and check the identity of someone before giving access to their home.

Awareness and training of call centre and front line colleagues who may need to visit customers in their home, is essential and will be a continued focus.

Customers can also choose the nominee scheme, giving consent for someone to act on their behalf.

**Line 19 Customers receiving services through the SAR/PSR: (e) support with 'other needs'**

*Customers receiving services through the SAR-PSR: (e) support with 'other needs' including support offered through the SAR-PSR not captured in (a) to (d) [APP4015RR—APP4018RR] above.*

*Companies should count each individual receiving support; this means there could be more than one customer counted as registered on the priority service support scheme in a property.*

We also offer our customers methods of PSR support not listed in the above lines. One such method of support is for those customers who need extra help on a short term basis. Potential triggers that may leave a customer in need of such support include; divorce, bereavement, loss of job/income, becoming a carer or recovering from an operation. This support may be financial, non financial or both.

We are able to assist customers in a number of ways where an additional or specific presence is required. Special requests for female only contact if a home visit is required and signposting to other supportive third parties are two such examples of the assistance we may provide.

Because of the link between financial and non financial vulnerability, we signpost customers and their representatives towards the financial support we provide through social tariffs and low value plans. We also actively signpost customers and their representatives to other organisations that can provide additional or specialist support. These include:

- Wales Council for Deaf People
- Age Concern (Cymru)
- Disability Wales
- Office of the Public Guardian
- Step Change
- Care and Repair
- Victim Support
- Alzheimer's Society
- Wales Council for the Blind
- Citizens Advice Bureau

**Line 20 Customers satisfied that the services are easy to access**

*Customers satisfied that the services provided by their company are easy to access, as a percentage of all customers. This may include, but is not limited to, satisfaction of customers in relation to the range of methods they can use to contact their supplier and satisfaction that the information provided is clear and easy to understand.*

The values from 2017-18 have been derived the acceptability research phase 2.

We have increased the actual 2018-19 figure by 1% each year between 2018-19 and 2024-25. We have estimated that we expect this to increase due to our customer services activities during AMP7. This is not a detailed forecast.

We have extrapolated the data back to 2013-14 as this is not an area covered by CCWater "Water Matters."

We have no previous data for years 2013-14 to 2017-18 and so this has been estimated to be the same as the actual figure in 2018-19. This is replicated for the inputs for Business retail customers. Business customers views were captured in our Acceptability Phase 2 research

Line 21 Customers on SAR/PSR contacted over the previous two years to ensure they are still receiving the right support

*Individuals on SAR-PSR contacted over the previous two years to ensure they are still receiving the right support, as a percentage of all individuals on the SAR-PSR. In relation to this metric, a contact here is defined as a proactive interaction in which contact was made with the customer and their personal information updated as appropriate.*

In 2016-17 and 2017-18 we did not proactively engage with customers registered on the priority services register. However early into the current year (2018-19) we have proactively contacted all customers currently on the PSR to ensure that they wish to remain on the register and that the data we hold for them is up to date. We have made a commitment to engage with customers every five years to ask if their needs have changed and or if they wish to remain on our PSR. All customers have been contacted in 2018-19 after which, we will proactively contact 20% of the PSR customer base each year.

Lines 9 – 15

#### General

We have deflated all costs to 2017/18 prices based on the annual average CPIH.

We have included all of our affordability tariffs in this analysis: HelpU, WaterSure Wales, Welsh Water Assist Transition, Water Collect and Water Direct. The exceptions are where it is explicit in the line descriptions.

Any changes from the table submitted in response to Query WSH-IAP-AV-005 have been explained in the respective line commentary.

For the extension of the table from 2025/26 to 2029/30 we have assumed that there is no change in the number of HelpU customers from the assumed total at the end of 2024/25. We believe that this is a reasonable assumption to make as we have reached the cap on willingness to pay for a cross-subsidy and so any additional customers would need to be discussed with customers as part of on-going affordability as well as PR24 preparations.

#### Section A - Affordability

Line 1: Real bill profile tested with customers from 2020-21 to 2024-25

*Company should outline the bill profile on which the acceptability and affordability metrics reported in lines 3-8 are based.*

These figures were tested with customers in the original affordability and acceptability testing, the results of which were submitted in September 2018. In this research we tested the forecast bills beyond 2020, so the cells for 2013-14 to 2017-18 are left blank. The cells for 2018-19 and 2019-20 reflect the current forecast of bills for the last two years of AMP6, against which customers will be comparing the AMP7 bill proposals. The numbers from 2017-18 onwards are in 2017-18 prices. With non-household customers, because the range of bills from very small customers to very large is so wide, we tested a percentage change in bills rather than try to establish an absolute or average figure. The percentage change tested was a 5% reduction in 2020-21 and then flat from 2021-25. The table does not allow for these percentage figures to be included so we have left them blank.

Line 2: Real bill profile tested with customers beyond 2025

*Company should outline the bill profile tested with customers beyond 2025. Company should fill out data for this question beyond 2025.*

We did not test real bill profiles beyond 2025 with customers in our original affordability and acceptability testing. As part of the additional customer research that we are now undertaking, we are testing our proposed bill profile for the whole period 2020-2030. The figures in this row are the bill profiles used in this research. This research is not covering non-household customers, so we have left the relevant cells blank in this research.

Line3 Customers finding the level of their water bills affordable: (a) for companies who charge for water only (WoCs).

This line is not applicable to us and has therefore been left blank.

Line 4: Customers finding the level of their combined bills affordable: (b) for companies who charge for both water and wastewater (WaSCs)

*Customers finding the level of their bills affordable: (b) for companies who charge for both water and wastewater (WaSCs), the customers who agree that the water and wastewater charges that they pay are affordable to them in real terms, as a percentage of all customers surveyed.*

Data in this line has come from two sources: CCWater surveys provided the input from 2013-14 to 2016-17 and Welsh Water's Acceptability Phase 2 research has provided the input from 2017-18 to 2024-25. The CCWater survey and our survey, although representing the same line of data have different methodologies. This means that years 2013-14 to 2016-17 using the CCWater report and years 2017-18 to 2024-25 using our report are not comparable due to methodology differences; which include that the method of completion is different, question responses are coded differently and different numbers of customer engaged.

There is an 8% increase in affordability between 2013-14 and 2016-17 (CCWater Water Matters Report). There is then a significant rise in figure to 96% in 2017-18 using our Acceptability testing phase 2 survey results. This figure then decreases by 2% for 2018-19 to 2024-25.

Business retail customers' data was not available for the years 2013-14 to 2016-17. The 2017-18 to 2024-25 figures therefore are the same for all years and taken from the 2017-18 Acceptability Phase 2 research results.

Further information on the development and undertaking of the customer research programme can be found in supporting information 1.1C PR19 Customer Engagement: Bills research.

The figures from 2025-30 are not yet available as the research is ongoing. We expect to be able to submit the results to Ofwat by 30 April.

Line 5 Customers finding the level of their combined bills affordable: (c) for companies who charge for water only (WoCs)

This line is not applicable to us and has therefore been left blank.

Line 6 Customers finding their water bills acceptable: (a) for companies who charge for water only (WoCs)

This line is not applicable to us and has therefore been left blank.

Line 7: Customers finding their combined bills acceptable: (b) for companies who charge for both water and wastewater (WaSCs)

*Customers finding their bills acceptable: (b) for companies who charge for both water and wastewater (WaSCs), customers who agree that their water and wastewater bill is acceptable when considering the bill profile in real terms, which takes into account the service package as a whole, as a percentage of all customers surveyed.*

Household customer data for years 2013-14 and 2014-15 is not available for AMP5 acceptability and so this is assumed to be the same as the known figure in 2015-16.

Business customer views were captured in the Welsh Water Acceptability Phase 2.

Business customer data before 2017-18 is not known and so each year is assumed to be the same as the known 2017-18 figure.

Residential and Business customers' acceptability figure from the PR19 research has been used for all years between 2020-21 and 2024-25 and PR14 survey data has been used for 2013-14 to 2019-20. Both PR14 and PR19 surveys included the same question, however the method in which customers have been engaged is different.

Further information on the development and undertaking of the customer research programme can be found in supporting information 1.1C PR19 Customer Engagement: Bills research.

The figures from 2025-30 are not yet available as the research is ongoing. We expect to be able to submit the results to Ofwat by 30 April.

**Line 8 Customers finding their combined bills acceptable: (c) for companies who charge for water only (WoCs)**

This line is not applicable to us and has therefore been left blank.

**Line 9 Total value of social tariff discounts (excluding WaterSure)**

*"Total value" refers to the sum directly transferred to customers. The total for social tariffs should include all schemes that could be termed as such, and should not include WaterSure, WaterSure Plus, hardship funds and payment matching schemes. It should not include the administrative costs incurred by companies.*

This is calculated as the difference between the pre-switching bill and the social tariff multiplied by the total number of active tariffs. It does not include administration costs. The social tariffs included are HelpU, Water collect and Water direct.

The values have changed from WSH-IAP-AV-005 for all years due to the exclusion of the WaterSure Wales values arising from the clarification in the line commentary

The values have changed from WSH-IAP-AV-005 for 2019/20 to 2024/25 due to the correction of an error in the original submission which double counted part of the company contribution.

**Line 10 Cost of social tariff cross-subsidy (per customer)**

*refers to the total cost of the cross-subsidy divided by all customers that pay for the cross-subsidy through their bills.*

*Please note this should not include costs associated with the administration or co-ordination of these schemes.*

*Please note 'all customers' refers to all bill-paying customers, and not just those who pay a cross-subsidy.*

This is calculated as the annual amount of the social tariff discount that is paid for by "non-social tariff" customers divided by all household customers measured on an annual average basis. This is the cross-subsidy for HelpU.

The values have changed from WSH-IAP-AV-005 for all years due to the clarification in the line commentary that "per customer" refers to all customers and not just those paying the cross-subsidy and the exclusion of watersure wales customers in line with the clarification of the definition of social tariffs in line 9 .

**Line 11 Cost of company contribution to social tariff (per customer)**

*refers to the total cost of the cross-subsidy divided by all customers.*

*Please note this should not include costs associated with the administration or co-ordination of these schemes."*

This is calculated as the annual amount of the social tariff discount that is paid for by the company, as revenue foregone, divided by all household customers measured on an annual average basis. This is the company contribution for all social tariffs and does not include administration costs.

The values have changed from WSH-IAP-AV-005 for all years due to the clarification that "per customer" refers to all customers and not just those paying the cross-subsidy and the exclusion of watersure wales customers in line with the clarification of the definition of social tariffs in line 9

**Line 12 Number of customers receiving social tariffs (excluding WaterSure)**

*refers to the total number of customers receiving a bill discount through a company-run social tariff scheme. Please note that this should exclude all other forms of bill discounts such as WaterSure or hardship funds.*

This is the total number of customers who receive bill discounts through a company run social tariff scheme, not including the number of WaterSure Wales customers or customers who benefit from hardship funds, calculated on an annual average basis.

The values have changed from WSH-IAP-AV-005 for all years as the annual average number has been used for the business plan tables to be aligned with the calculation of the metrics. Also duplicates arising from a small number of customers who receive more than one discount have been removed.

**Line 13 Total value of WaterSure and WaterSure Plus discounts**

*refers to the combined value of the discounts offered to customers who receive WaterSure or WaterSure Plus. 'Total value' refers to the sum directly transferred to customers. Please note this should exclude all other forms of bill discounts such as company-run social tariffs or hardship funds and exclude administrative costs.*

This is calculated as the difference between the average household bill and the WaterSure Wales tariff.

**Line 14 Cost of WaterSure and WaterSure Plus cross-subsidy (per customer)**

*refers to the total cost of the discount provided to customers receiving WaterSure or WaterSure Plus divided by all customers that pay for the cross-subsidy through their bills. Please note this should not include costs associated with the administration or co-ordination of these schemes.*

This is calculated as the annual amount of the WaterSure Wales discount that is paid for by "non-social tariff" customers divided by all household numbers measured on an annual average basis.

The values have changed from WSH-IAP-AV-005 for all years due to the clarification that "per customer" refers to all customers and not just those paying the cross-subsidy.

**Line 15 Number of customers receiving WaterSure and WaterSure Plus**

*refers to the number of customers receiving a bill discount and further benefits associated with the WaterSure or WaterSure Plus schemes.*

This is the number of customers on the WaterSureWales tariff calculated on an annual average basis.

The values have changed from WSH-IAP-AV-005 for all years as the annual average number has been used for the business plan tables to be aligned with the calculation of the metrics.

**Line 16 Total value of hardship funds**

*Hardship funds are defined as any grant given by a company to a customer to alleviate financial hardship. 'Total value' refers to the sum directly transferred to customers. It should not include the administrative costs incurred by companies. Please note this should exclude all other forms of bill discount such as company-run social tariffs, and WaterSure or WaterSure Plus.*

The analysis of hardship funds is based on our "Customer Assistance Fund," a fund that offers write-off of aged debt for consistent and regular payments. We only offer CAF to residential customers, as such we have entered zeros for all years relating to Business retail costs.

No change to the figures as submitted in response to Query WSH-IAP-AV-005, (17/18 to 24/25)

Additional data for all years to 2030 have been calculated by extending the current forecast out.

**Line 17 Number of customers receiving hardship funds**

*Hardship funds are defined as any grant given by a company to a customer to alleviate financial hardship.*

This is the number of customers benefitting from the Customer Assistance Fund (CAF) that is used to help customers alleviate financial hardship. We only offer the CAF to residential customers, as such we have entered zeros for all years relating to Business customers.

No change to the figures as submitted in response to Query WSH-IAP-AV-005, (17/18 to 24/25)  
Additional data for all years to 2030 have been calculated by extending the current forecast out.

**Line 18 Total value of payment matching support**

*Total value of payment matching support refers to the combined value of the discounts offered to customers who receive payment matching assistance. 'Total value' refers to the sum directly transferred to customers. Please note this should exclude all other forms of bill discounts such as company-run social tariffs, hardship funds, or WaterSure and exclude administrative costs.*

Based upon the guidance provided we do not have any schemes that match the definition of payment matching. As such we enter zero in all cells.

**Line 19 Cost of payment matching cross-subsidy**

*Cost of payment matching cross-subsidy (per customer) refers to the total cost of the discount provided to customers receiving payment matching divided by all customers that pay for the cross-subsidy through their bills. Please note this should not include costs associated with the administration or co-ordination of these schemes.*

Based upon the guidance provided we do not have any schemes that match the definition of payment matching. As such we enter put 0 in all cells.

**Line 20 Number of customers receiving payment matching support**

*Number of customers receiving payment matching refers to the number of customers receiving a bill discount and further benefits associated with payment matching schemes.*

Based upon the guidance provided we do not have any schemes that match the definition of payment matching. As such we enter zero in all cells.

**Line 21 Cost of company contribution to payment matching support (per customer)**

*Cost of company contribution to payment matching support (per customer) refers to the total company contribution to payment matching schemes divided by all customers.*

*Please note this should not include costs associated with the administration or co-ordination of the scheme.*

Based upon the guidance provided we do not have any schemes that match the definition of payment matching. As such we enter zero in all cells.

**Line 22 Customers aware of the non-financial vulnerability assistance measures offered**

*Customers aware of the non-financial vulnerability assistance measures offered as a percentage of all customers. This includes services offered through the Special Assistance/ Priority Service Register (SAR/PSR) and other care services offered.*

*Note: this line does not apply to companies with fast-track business plans.*

Data for years 2012-13 to 2017-18 has been taken from the CCWater "Water Matters." They are seven-year rolling averages. The seven-year trends are assessed using the Mann-Kendall method (Mann 1945, Kendall 1975). The Mann-Kendall analysis is applied to exponentially smoothed, transformed data rather than the raw data.

The CCWater survey only asks about Welsh Water Assist / WaterSure Wales not the broader range of affordability assistance measures. This data is the nearest proxy data we have to represent previous years.

We have forecast an increased awareness by 1% in each future year to align with our Social Tariff strategy to increase the number of customer on social tariffs to c150,000 people by 2025. This is not

a detailed forecast. We do not have any justification at this time for an increase in awareness beyond the end of AMP7. As such we have entered ‘flat’ numbers beyond 2025. Business Retail customer data is not included for this line as it is not applicable to this customer group.

**Line 23 Customers on Special Assistance Register/ Priority Service Register (SAR/PSR)**

*Customers on Special Assistance/ Priority Service Register (SAR/PSR) - the number of customers registered on the priority service support scheme on 31st March of each year. Each household should be counted only once.*

As confirmed in our response to Query WSH-IAP-AV-008, the values shown here are the number of unique properties (residential or non-residential) forecast to be on our PSR irrespective of whether multiple occupants of a property are eligible for the PSR scheme or if an occupant has multiple PSR eligible characteristics.

The number of customers signed up to our priority services register grew by nearly 50% between 2012 and 2016. Our Business Plan assumes that registration will double to 52,000 by the end of AMP6 and then grow by 10,000 per annum over AMP7, reaching 103,000 by 2025. For completeness following the IAP feedback the values have changed from APP4 line 13 – residential (Sept Submission) for year 24/25 due to the revised guidance received on PSR Reach and the required minimum standard.

This increase will be achieved through various means, including:

- Improved awareness
- Call centre coaching to continue to educate customers about the availability of our priority register
- Awareness and training for front line colleagues
- Partnering with similar organisations
- Targeted community engagement campaigns.

Customers receiving support with communication, mobility restrictions, supply interruption, security and other needs are all forecast to increase over the period shown for both residential and business customers.

Please note that the sum of lines 25- 29 do not equal line 26 because, in line with the above definition, some customers receive more than one service. This count is as of 31 March each year. Business customers receiving support on the priority services register include; customers living in farms or any other multiple property that are registered as “Non-household” properties. It will also include Nursing homes, private dialysis centres and hospitals.

We include all customers on our PSR in this measure, included those provided via data share. The residential volumes in line 23 are the numerator of the PSR Reach (SV5) performance commitment in APP1. Where PSR reach is calculated as APP4 Line 23 – residential / R1 Line 16. A reconciliation is provided in the table below;

	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
APP 4 (Line 23) Residential	38,813	51,751	61,703	71,655	81,607	91,559	102,947	104,436	105,436	106,436	107,436	108,436
APP 4 (Line 23)	187	249	297	345	393	441	489	492	494	496	497	499

Businesses												
<b>APP4 (Line 23) Total</b>	38,815	52,000	62,000	72,000	82,000	92,000	103,436	104,928	105,930	106,932	107,933	108,935
R1 (Line 16) HH Connected	1,402	1,413	1,425	1,436	1,448	1,459	1,471	1,481	1,490	1,500	1,510	1,520
<b>SV5 PSR Reach</b>	2.8%	3.7%	4.3%	5.0%	5.6%	6.3%	7.0%	7.1%	7.1%	7.1%	7.1%	7.1%

**Line 24 Customers on Special Assistance Register/ Priority Service Register (SAR/PSR)**

*Customers on Special Assistance/ Priority Service Register (SAR/PSR) - the number of customers registered on the priority service support scheme on 31st March of each year, as a percentage of the properties in the company's area.*

To ensure we align to the Common Performance Commitment on the Priority Services Register (PSR) we have committed to grow PSR from 1.9% in 2017/18 to 7% of our customer base by 2024/25. For completeness following the query WSH-IAP-AV-008 and the IAP feedback the values have changed from APP4 line 14 – residential (Sept Submission) for all years due to the revised guidance received on PSR Reach and the required minimum standard.

The residential percentage in this line, aligns to the definition of the PSR Reach performance commitment in APP1 and as such APP4 Line 24 = SV5 in APP1 for all years.

See line 23 for more detail on the calculation of this measure.

**Line 25 Customers receiving services through the SAR/PSR: (a) support with communication**

*Customers receiving services through the SAR/PSR: (a) support with communication, including, but not limited to, alternative format for bills, bespoke or translated communication offerings.*

This line sums the total customers who:

- Are blind or have visual impairments. The support provided includes bills and correspondence being available in large print or braille, audio tape-CD-MP3, as well as reading bills over the phone.
- Have hearing or speech impairments. Where the customer has access to a text phone, we offer a Text Relay Service, which is free to use and converts speech into text. Customers are also able to talk to us through Live Chat, Facebook or Twitter.
- Have dyslexia or other difficulties understanding the presentation of bills. Bills and correspondence can be provided on alternative coloured paper and font size, to stabilise text. Recite Me is available on our website, which helps make our website more accessible as it allows visitors to our website to customise the way they need it to work for them. This includes text to speech functionality, dyslexia software, an interactive dictionary and a translation tool for many languages. It also provides conventional support for example to make font size large.
- Have learning disabilities. Bills and correspondence may be converted into Easy Read format.

In all cases, customers can also choose the nominee scheme, giving consent for someone to act on their behalf.

For completeness following the IAP feedback the values have changed from APP4 line 15 – residential (Sept Submission) for year 24/25 due to the revised guidance received on PSR Reach and the required minimum standard.

**Line 26 Customers receiving services through the SAR/PSR: (b) support with mobility and access restrictions**

*Customers receiving services through the SAR/PSR: (b) support with mobility and access restrictions, including, but not limited to, supporting customers who cannot access their water meters or who require a knock and wait service to allow longer time to get to the door.*

Our projections show that we expect to see a rise in customers in receipt of this support in future years as a result of our change in approach to priority services. Until recently our approach has been largely reactive, relying on call centre staff to identify potentially vulnerable customers and inform them of the priority register. Additionally, our marketing of PSR has been limited. We now strive to promote PSR alongside our social tariff schemes, promote greater awareness in our customer facing roles, partner with similar organisations, and utilise other approaches detailed in line 23 above.

For customers who may have mobility or access restrictions, we are able to support in a number of ways:

- If housebound, we can arrange to visit customers at their home to discuss bills and payments.
- A 'knock and wait' service ensures customers have time to get to the door.
- A password scheme to protect from bogus callers who claim to be working for the company, so that customers feel safe in their own homes. Our PSR and website also alerts customers to bogus callers.
- Where necessary, we will arrange alternative supplies of water during a supply interruption.
- Where possible, we can relocate a water meter to make it more accessible for customers to read. Alternatively, we can offer to read the meter more frequently.

For all of the above, we provide awareness training for our call centre and front line colleagues who may need to visit customers in their homes. Customers can also choose the nominee scheme, giving consent for someone to act on their behalf.

For completeness following the IAP feedback the values have changed from APP4 line 16 – residential (Sept Submission) for year 24/25 due to the revised guidance received on PSR Reach and the required minimum standard.

**Line 27 Customers receiving services through the SAR/PSR: (c) support with supply interruption**

*Customers receiving services through the SAR/PSR: (c) support with supply interruption including, but not limited to, advance notice ahead of a planned supply interruption or emergency water supply during a planned supply interruption for customers with particular medical needs.*

This line sums the total customers who have require additional support during supply interruptions as a result of a chronic illness or a medical condition that requires a continuous supply of water, for example home dialysis customers, alternative water supplies are provided during a supply interruption. Our response to providing alternative supplies is immediate.

Wherever we can, we endeavour to use a text (SMS) system to warn of supply interruption. In the event that SMS is not possible, we aim to pre-warn at the door (face to face) and/or over the phone. Customers can choose the nominee scheme, giving consent for someone to act on their behalf.

For completeness following the IAP feedback the values have changed from APP4 line 17 – residential (Sept Submission) for year 24/25 due to the revised guidance received on PSR Reach and the required minimum standard.

**Line 28 Customers receiving services through the SAR/PSR: (d) support with security**

*Customers receiving services through the SAR/PSR: (d) support with security including, but not limited to, password schemes and identity checks.*

Our password scheme helps to protect PSR customers from bogus callers who claim to be working for the company, ensuring that customers feel safe in their own homes. Our PSR and website alerts customers to bogus callers. All relevant colleague ID badges have a dedicated 'Bogus Caller' number included, allowing customers to call and check the identity of someone before giving access to their home.

Awareness and training of call centre and front line colleagues who may need to visit customers in their home, is essential and will be a continued focus.

Customers can also choose the nominee scheme, giving consent for someone to act on their behalf. For completeness following the IAP feedback the values have changed from APP4 line 18 – residential (Sept Submission) for year 24/25 due to the revised guidance received on PSR Reach and the required minimum standard.

**Line 29 Customers receiving services through the SAR/PSR: (e) support with 'other needs'**

*Customers receiving services through the SAR/PSR: (e) support with 'other needs' including support offered through the SAR/PSR not captured in (a) to (d) [APP4015RR - APP4018RR] above.*

The data provided in this line is compliant with definition provided above.

We also offer our customers methods of PSR support not listed in the above lines. For example, for those customers who need extra help on a short term basis. Potential triggers that may leave a customer in need of such support include; divorce, bereavement, loss of job/income, becoming a carer or recovering from an operation. This support may be financial, non-financial or both.

We are able to assist customers in a number of ways where an additional or specific presence is required. Special requests for female only contact if a home visit is required and signposting to other supportive third parties are two such examples of the assistance we may provide.

Because of the link between financial and non-financial vulnerability, we signpost customers and their representatives towards the financial support we provide through social tariffs and low value plans. We also actively signpost customers and their representatives to other organisations that can provide additional or specialist support.

These include:

- Wales Council for Deaf People
- Age Concern (Cymru)
- Disability Wales
- Office of the Public Guardian
- Step Change
- Care and Repair
- Victim Support
- Alzheimer's Society
- Wales Council for the Blind
- Citizens Advice Bureau

For completeness following the IAP feedback the values have changed from APP4 line 19 – residential (Sept Submission) for year 24/25 due to the revised guidance received on PSR Reach and the required minimum standard.

**Line 30 Customers satisfied that the services are easy to access**

*Customers satisfied that the services provided by their company are easy to access, as a percentage of all customers.*

*This may include, but is not limited to, satisfaction of customers in relation to the range of methods they can use to contact their supplier and satisfaction that the information provided is clear and easy to understand.*

*Note: this line does not apply to companies with fast-track business plans.*

The values from 2017-18 have been derived the acceptability research phase 2.

We have increased the actual 2018-19 figure by 1% each year between 2018-19 and 2024-25. We have estimated that we expect this to increase due to our customer services activities during AMP7. This is not a detailed forecast. We have no reason to expect this level to increase further beyond 2025 at this stage. As such we have entered 'flat' numbers beyond 2025.

We have extrapolated the data back to 2013-14 as this is not an area covered by CCWater "Water Matters."

We have no previous data for years 2013-14 to 2017-18 and so this has been estimated to be the same as the actual figure in 2018-19. This is replicated for the inputs for Business retail customers. Business customers views were captured in our Acceptability Phase 2 research.

**Line 31 Customers on SAR/PSR contacted over the previous two years to ensure they are still receiving the right support**

*Customers on SAR/PSR contacted over the previous two years to ensure they are still receiving the right support, as a percentage of all customers on the SAR/PSR.*

*In relation to this metric, a contact here is defined as a proactive interaction in which contact was made with the customer and their personal information updated as appropriate. Each household should be counted only once.*

We are unable to provide data for historic years to the same level of accuracy as 18/19 onwards due to inadequate evidence. From 18/19 we have proactively contacted all customers currently on the PSR to ensure that they wish to remain on the register and that the data we hold for them is up to date.

We highlight in our residential retail business plan that our focus in this period has been on making sure that the services we provide are understood by customers, ensuring that our services meet the requirements of customers in vulnerable circumstances and working with other organisations to make sure that those customers who need our services get access to them.

In order to fulfil this requirement we will directly contact, by letter, all customers registered on our PSR every 2 years where the customer has signed up directly registered with us. This does not apply to customers that have been added to the register via data share. As a result we assess our performance against this measure as data checking 100% of customers on our PSR register where customers directly sign up with Welsh Water.

Whilst we take ownership of outbound contact to the customer, we have in place a process to deal with customers who do not respond to our contact attempts. We will continue to update their record with no contact and the dates attempted whilst retaining the customer on the register to mitigate putting any customer at additional risk. Therefore, it is our assumption that we would meet the definition of a "proactive contact" where we time and date stamp that we have sent a contact to the individual/household and note 'no response' from them on the register.

Whilst checking accuracy is distinct from refreshing consent, it is connected, and we note that it is unlikely to be appropriate to contact customers every 2 years to refresh their consent if the reason they are on the PSR is for a permanent condition (eg. pensionable age, blindness). As part of the Water and Energy PSR Data Share Project, we are liaising with the ICO in relation to a possible approach whereby we inform individuals that we will keep them on the PSR until they tell us they no longer want to be on it, if they have a permanent condition.

This row aligns to Sv5a; PSR data checking in APP1.

## App5- PR14 Reconciliation performance commitments and

## App6 - PR14 Reconciliation sub measures

These tables do not lend themselves to line commentary and so we have created supporting documents to explain our actual and forecast performance against the PR14 performance commitments

Further detail and commentary on our PR14 performance measures and Outcome Delivery Incentives can be found in supporting document 5.4 PR19 Past performance report.

## App7 – Proposed price limits and average bills

This table shows the impact of our business plan on residential customers at 2017-18 financial year average prices for AMP7 and Outturn (nominal price base) for the blind years 2018-19 and 2019-20.

### Line Commentary

#### Block A – Proposed wholesale limits

Block A contains a company's proposed revenues in each year from 2020-21 to 2024-25, calculated from the associated revenue projection tables for each price control.

#### Line 1 – 5

The output of these lines are populated using a formula pre-populated in the data table.

#### Block B Proposed wholesale revenue requirement limits with re-profiling

Block B contains a company's proposed revenues in each year from 2020-21 to 2024-25, calculated from the associated revenue projection tables for each price control. The re-profiling of revenue between years is included.

#### Line 6 - 10

The output of these lines are populated using a formula pre-populated in the data table.

#### Block C - Total wholesale allowed revenue

Block C contains a company's total wholesale allowed revenues. These figures are copied directly from line 24 of the revenue projection tables for each price control.

#### Line 11 – 15

The output of these lines are populated using a formula pre-populated in the data table.

#### Block D - Proposed wholesale revenue requirement limits with PR14 reconciliation adjustments

Block D contains a company's revenues but with the company's PR14 reconciliation adjustments included. These figures are copied directly from line 27 of the revenue projection tables for each price control.

#### Line 16 - 20

The output of these lines are populated using a formula pre-populated in the data table.

#### Block E K factors and bioresources average revenue per tonne of dry solid

Block E requires a company to input its proposed wholesale K factors for each wholesale price control and for bioresources, the average revenue requirement per tonne of dry solids.

#### Line 21- Wholesale water resources k factor including PR14 reconciliation adjustments

*Forecast wholesale water resources k factors including the PR14 reconciliation adjustments.*  
Calculated using the Ofwat financial model.

#### Line 22 - Wholesale water network plus k factor including PR14 reconciliation adjustments

*Forecast wholesale water network plus k factors including the PR14 reconciliation adjustments.*  
Calculated using the Ofwat financial model.

#### Line 23 - Wholesale wastewater network plus k factor including PR14 reconciliation adjustments

*Forecast wholesale wastewater network plus k factors including the PR14 reconciliation adjustments.*  
Calculated using the Ofwat financial model.

#### Line 24 - Wholesale bioresources average revenue per tonne of dry solids

*Forecast wholesale bioresources average revenue per tonne of dry solids for the period 2020-25.*  
Calculated using the Ofwat financial model.

Line 25 - Wholesale dummy control k factor including PR14 reconciliation adjustments  
We are not using the dummy control.

#### Block F - Average wholesale bills

Block F shows the average wholesale bills for household customers for each price control. These figures are calculated from the revenue projection tables for each price control.

The average wholesale bills shown here include the impact on revenue in 2020-25 of the PR14 post financeability adjustments for ODIs, Totex cost sharing, wholesale revenue forecasting incentive mechanism and blind year adjustments from the revenue adjustments feeder model.

Line 26 – 35

The output of these lines are populated using a formula pre-populated in the data table.

#### Block G - Average retail bills ~ residential

Block G shows the average residential retail bill for water and wastewater services. These figures should be derived from R1 and R7.

The average retail bills shown here include the impact on revenue in 2020-25 of the PR14 Residential retail mechanism.

Line 36 – 38

The output of these lines are populated using a formula pre-populated in the data table.

#### Block H - Average total bills ~ residential

Block H calculates the average total household bill for water and wastewater services.

Bills presented here are calculated in a manner consistent with the Ofwat financial model, however for 2021-2025 the sum of the average total bill – water and average total bill wastewater does not equal the average total combined bill. This is as a result of the retail elements of the average total bill for water being calculated as the retail single service revenue for water divided by water only customers, and the average total bill for wastewater being calculated as the retail single service revenue for waste divided by waste only customers.

Average total bills for 2018-19 and 2019-20 are shown in outturn prices and have been calculated as follows:

		<b>2018/19</b>	<b>2019/20</b>
		<b>Outturn</b>	<b>Outturn</b>
<b>Water</b>			
Wholesale Revenue	£m	211.112	223.406
Retail Revenue	£m	25.78	25.854
Gross Household Revenue	£m	236.892	249.26
Number of properties	000	1,268.47	1,277.87
Gross Average household bill outturn	£	186.75	195.06
Gross Average household bill CPIH	£	182.02	185.84
<b>Wastewater</b>			
Wholesale Revenue	£m	317.583	325.461
Retail Revenue	£m	27.395	27.454
Gross Household Revenue	£m	344.978	352.915
Number of properties	000	1,319.63	1,328.86
Gross Average household bill outturn	£	261.42	265.58
Gross Average household bill CPIH	£	254.80	253.03
<b>Combined</b>			
Gross Average household bill outturn	£	448.17	460.64
Gross Average household bill CPIH	£	436.82	438.87
CPIH deflator		102.60%	104.96%

Line 39

*Average total bill ~ water*

Actual and forecast average total residential bill for water. Equals App7 line 22 plus line 24 plus line 31 for years 2020-25.

Line 40

*Average total bill ~ wastewater*

Actual and forecast average total residential bill for wastewater. Equals App7 line 26 plus line 28 plus line 32 for years 2020-25.

Line 41

*Average total combined bill*

Actual and forecast average total residential bill for combined water and wastewater services.

Block I - Total revenue summary

Block I provides a summary of revenue at the total appointee level.

Line 42- 45

The output of these lines are populated using a formula pre-populated in the data table.

Line 46

*Discount rate for reprofiling allowed revenue*

The discount rate used when using the reprofiling revenue functionality in the PR19 financial model. We have used Ofwat's early view of the cost of capital published in the final methodology for PR19 to calculate an appropriate discount rate for reprofiling revenue in the PR19 financial model.

## Welsh Water Appointed Business Tables Commentaries

Appointee WACC nominal	5.47%
RPI	<u>3.00%</u>
Appointee WACC RPI real	2.30%
Appointee WACC nominal	5.47%
CPIH	<u>2.00%</u>
Appointee WACC CPIH real	3.30%
CPIH/RPI split at start of AMP7	<u>50%</u>
Discount rate for reprofiling revenue	<u>2.90%</u>

## App8 - Appointee financing

### Block A - Financial

#### Line 1

##### *Net debt*

Net debt for the actual company calculated as follows:

	<b>2019-20</b> £m
Cash and cash equivalents App12 Line 11	(100.00)
Borrowing (Current liabilities) App12 Line 15	388.13
Borrowing (Non-current liabilities) App12 Line 22	3,196.94
<b>Net debt (outturn prices)</b>	<b>3,485.07</b>
2019-20 CPIH year-end index	110.3
2017-18 CPIH year-end index	105.1
<b>Net debt (2017-18 FYE CPIH deflated)</b>	<b>3,320.77</b>

	<b>2019-20</b> £m
Cash and cash equivalents App12 Line 11	(100.00)
Borrowing (Current liabilities) App12 Line 15	388.131
Borrowing (Non-current liabilities) App12 Line 22	3,208.98
<b>Net debt (outturn prices)</b>	<b>3,497.11</b>
2019-20 CPIH year-end index	110.3
2017-18 CPIH year-end index	105.1
<b>Net debt (2017-18 FYE CPIH deflated)</b>	<b>3,332.238</b>

#### Line 2

##### *Equity dividends paid*

The financial plans for the actual company assume an equity dividend which represents the company's contribution to social tariffs.

	2020-21 £m	2021-22 £m	2022-23 £m	2023-24 £m	2024-25 £m
Equity dividend paid App11 Line 17 (outturn prices)	-14.7	-15.8	-17	-18.1	-19.3
CPI(H) Fin year average inflate from 2017-18 average	107.06%	109.20%	111.38%	113.61%	115.88%

<b>Equity dividend paid (2017-18 CPIH deflated)</b>	<b>-13.731</b>	<b>-14.469</b>	<b>-15.262</b>	<b>-15.931</b>	<b>-16.655</b>
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Line 3

*Cash inflow from equity financing*

As a not-for-shareholder company there is no cash inflow from equity financing during the period.

Block B - RCV year end balances

Line 4

*Wholesale water closing RCV at 31 March 2020 in 2012-13 prices (from PR14 FD)*

Pre downloaded FD14 data. 2012-13 FYA prices.

Line 5

*Wholesale water closing RCV at 31 March 2020 in 2017-18 year end prices before midnight adjustments*

Input. This is an output from RCV adjustment feeder model.

Line 6

*Water ~ Total Adjustment RCV carry forward to PR19 at 2017-18 FYE CPIH deflated price base*

Input. This is an output from RCV adjustment feeder model.

Line 7

*Water ~ CIS RCV inflation correction at 2017-18 FYE CPIH deflated price base*

Input. This is an output from RCV adjustment feeder model.

Line 8

*Water ~ NPV effect of 50% of proceeds from disposals of interest in land at 2017-18 FYE CPIH deflated price base*

Input. This is an output from RCV adjustment feeder model.

Line 9

*Water ~ ODI RCV adjustment allocated to Water resources at 2017-18 FYE CPIH deflated price base*

Input. This is an output from RCV adjustment feeder model.

Line 10

*Water ~ ODI RCV adjustment allocated to Water network plus at 2017-18 FYE CPIH deflated price base*

Input. This is an output from RCV adjustment feeder model.

Line 11

*Water ~ Totex menu RCV adjustment at 2017-18 FYE CPIH deflated price base*

Input. This is an output from RCV adjustment feeder model.

Line 12

*Water ~ Other adjustment to wholesale RCV*

Input

Line 13

*Total wholesale water RCV at 31 March 2020 post midnight adjustments before allocation to price control units in 2017-18 FYE prices*

Sum of lines 5 to 12.

## Welsh Water Appointed Business Tables Commentaries

### Line 14

*Total wholesale water RCV at 31 March 2020 post midnight adjustments before allocation to price control units in 2017-18 FYA prices*

Closing value converted from 2017-18 FYE prices to 2017-18 FYA prices using data in App 23.

### Line 15

*Water resources % of total wholesale water RCV ~ 31 March 2020*

Copied from WS12 line 19.

### Line 16

*Water resources RCV ~ 1 April 2020*

Calculated.

### Line 17

*Water resources IFRS16 RCV adjustment*

Copied from App 33 line 21 and converted from 2017-18 FYE prices to 2017-18 FYA prices using data in App 23.

### Line 18

*RPI:CPIH indexation split of opening RCV 1 April 2020*

Pre populated. Generic value.

### Line 19

*Water resources 2020 RCV RPI inflated ~ 1 April (opening balance)*

Calculated. Opening 2020 RCV split 50%:50% to RPI and CPIH inflation pools in first year. Subsequent years opening balance is previous year closing balance.

### Line 20

*Run off on RPI inflated 2020 RCV ~ wholesale water resources*

Copied from Wr3 line 5

### Line 21

*Water resources 2020 RCV RPI inflated ~ 31 March (closing balance)*

Calculated. Closing balance = Opening balance minus run off.

### Line 22

*Water resources 2020 RCV CPIH inflated ~ 1 April (opening balance)*

Calculated. Opening 2020 RCV split 50%:50% to RPI and CPIH inflation pools in first year. Subsequent years opening balance is previous year closing balance.

### Line 23

*Run off on CPIH inflated 2020 RCV ~ wholesale water resources*

Copied from Wr3 line 7.

### Line 24

*Water resources 2020 RCV CPIH inflated ~ 31 March (closing balance)*

Calculated. Closing balance = Opening balance minus run off.

### Line 25

*Water resources post 2020 investment CPIH inflated ~ 1 April (opening balance)*

New additions opening balance is zero.

## Welsh Water Appointed Business Tables Commentaries

### Line 26

*Water resources post 2020 totex additions CPIH inflated*  
WS1 line 21 \* (1-WR4 line 19).

### Line 27

*Run off on post 2020 investment ~ wholesale water resources*  
Copied from Wr3 line 3.

### Line 28

*Water resources post 2020 investment CPIH inflated ~ 31 March (closing balance)*  
Calculated. Closing balance = Opening balance plus totex additions minus run off.

### Line 29

*Water network plus % of total wholesale water RCV ~ 31 March 2020*  
Copied from WS12 line 19.

### Line 30

*Water network plus RCV ~ 1 April 2020*  
Calculated.

### Line 31

*Water network plus IFRS16 RCV adjustment*  
Copied from App 33 line 42 and converted from 2017-18 FYE prices to 2017-18 FYA prices using data in App 23.

### Line 32

*RPI:CPIH indexation split of opening RCV 1 April 2020*  
Pre populated. Generic value.

### Line 33

*Water network plus RCV RPI inflated ~ 1 April (opening balance)*  
Calculated. Opening 2020 RCV split 50%:50% to RPI and CPIH inflation pools in first year. Subsequent years opening balance is previous year closing balance.

### Line 34

*Run off on RPI inflated 2020 RCV ~ wholesale water network plus*  
Copied from Wn3 line 5.

### Line 35

*Water network plus RCV RPI inflated ~ 31 March (closing balance)*  
Calculated. Closing balance = Opening balance minus run off.

### Line 36

*Water network plus RCV CPIH inflated ~ 1 April (opening balance)*  
Calculated. Opening 2020 RCV split 50%:50% to RPI and CPIH inflation pools in first year. Subsequent years opening balance is previous year closing balance.

### Line 37

*Run off on CPIH inflated 2020 RCV ~ wholesale water network plus*  
Copied from Wn3 line 7.

Line 38

*Water network plus RCV CPIH inflated ~ 31 March (closing balance)*

Calculated. Closing balance = Opening balance minus run off.

Line 39

*Water network plus post 2020 investment CPIH inflated ~ 1 April (opening balance)*

New additions opening balance is zero.

Line 40

*Water network plus post 2020 totex additions CPIH inflated*

WS1 line 21 \* (1 - WN4 line 14).

Line 41

*Run off on post 2020 totex additions ~ wholesale water network plus*

Copied from Wn3 line 3

.

Line 42

*Water network plus post 2020 investment CPIH inflated ~ 31 March (closing balance)*

Calculated. Closing balance = Opening balance plus totex additions minus run off.

Line 43

*Wholesale wastewater closing RCV at 31 March 2020 in 2012-13 prices (PR14 FD)*

Pre downloaded FD14 data. 2012-13 FYA prices.

Line 44

*Wholesale wastewater closing RCV at 31 March 2020 in 2017-18 year end prices before midnight adjustments*

Input. This is an output from RCV adjustment feeder model.

Line 45

*Wastewater ~ Total Adjustment RCV carry forward to PR19 at 2017-18 FYE CPIH deflated price base*

Input. This is an output from RCV adjustment feeder model.

Line 46

*Wastewater ~ CIS RCV inflation correction at 2017-18 FYE CPIH deflated price base*

Input. This is an output from RCV adjustment feeder model.

Line 47

*Wastewater ~ NPV effect of 50% of proceeds from disposals of interest in land at 2017-18 FYE CPIH deflated price base*

Input. This is an output from RCV adjustment feeder model.

Line 48

*Wastewater ~ ODI RCV adjustment allocated to Wastewater network plus at 2017-18 FYE CPIH deflated price base*

Input. This is an output from RCV adjustment feeder model.

Line 49

*Wastewater ~ Totex menu RCV adjustment at 2017-18 FYE CPIH deflated price base*

Input. This is an output from RCV adjustment feeder model.

Line 50

*Wastewater ~ Other adjustment to wholesale RCV*  
Input

Line 51

*Total wholesale wastewater RCV at 31 March 2020 post midnight adjustments before allocation to price control units in 2017-18 FYE prices*  
Sum of lines 42 to 48.

Line 52

*Total wholesale wastewater RCV at 31 March 2020 post midnight adjustments before allocation to price control units in 2017-18 FYA prices*  
Closing value converted from 2017-18 FYE prices to 2017-18 FYA prices using data in App 23.

Line 53

*Bioresources RCV (prior to midnight adjustments) 31 March 2020*  
Copied from WWS12 line 19.

Line 54

*Bioresources RCV (prior to midnight adjustments) 31 March 2020 in 2017-18 FYA prices*  
Input. This is an output from RCV adjustment feeder model.

Line 55

*Bioresources RCV ~ 1 April 2020*  
Copied. Bioresources RCV 31 March 2020 = Bioresources RCV 1 April 2020.

Line 56

*Bioresources IFRS16 RCV adjustment*  
Copied from App 33 line 63 and converted from 2017-18 FYE prices to 2017-18 FYA prices using data in App 23

Line 57

*Bioresources RCV post IFRS16 RCV adjustment ~ 1 April 2020*  
Calculated. Opening RCV = Bioresources RCV 1 April 2020 plus IFRS16 RCV adjustment.

Line 58

*RPI:CPIH indexation split of opening RCV 1 April 2020*  
Pre populated. Generic value.

Line 59

*Bioresources 2020 RCV RPI inflated ~ 1 April (opening balance)*  
Calculated. Opening 2020 RCV split 50%:50% to RPI and CPIH inflation pools in first year. Subsequent years opening balance is previous year closing balance.

Line 60

*Run off on RPI inflated 2020 RCV ~ wastewater network plus*  
Copied from Bio 4 line 5.

Line 61

*Bioresources 2020 RCV RPI inflated ~ 31 March (closing balance)*  
Calculated. Closing balance = Opening balance minus run off.

Line 62

*Bioresources 2020 RCV CPIH inflated ~ 1 April (opening balance)*

Calculated. Opening 2020 RCV split 50%:50% to RPI and CPIH inflation pools in first year. Subsequent years opening balance is previous year closing balance.

Line 63

*Run off on CPIH inflated 2020 RCV*

Copied from Bio4 line 7.

Line 64

*Bioresources 2020 RCV CPIH inflated ~ 31 March (closing balance)*

Calculated. Closing balance = Opening balance minus run off.

Line 65

*Bioresources post 2020 investment CPIH inflated ~ 1 April (opening balance)*

New additions opening balance is zero.

Line 66

*Bioresources post 2020 totex additions CPIH inflated*

WWS1 line 21 \* (1 - Bio 5 line 19).

Line 67

*Run off on post 2020 investment*

Copied from Bio 4 line 3.

Line 68

*Bioresources post 2020 investment CPIH inflated ~ 31 March (closing balance)*

Calculated. Closing balance = Opening balance plus totex additions minus run off.

Line 69

*Wastewater network plus RCV ~ 1 April 2020*

Calculated. Total wholesale wastewater RCV at 31 March 2020 post midnight adjustment minus Bioresources RCV.

Line 70

*Wastewater network plus IFRS16 RCV adjustment*

Copied from App 33 line 84 and converted from 2017-18 FYE prices to 2017-18 FYA prices using data in App 23.

Line 71

*Wastewater network plus RCV post IFRS16 RCV adjustment ~ 1 April 2020*

Calculated. Opening RCV = Wastewater network plus RCV 1 April 2020 plus IFRS16 RCV adjustment.

Line 72

*RPI:CPIH indexation split of opening RCV 1 April 2020*

Pre populated. Generic value.

Line 73

*Wastewater network plus RCV RPI inflated ~ 1 April (opening balance)*

Calculated. Opening 2020 RCV split 50%:50% to RPI and CPIH inflation pools in first year. Subsequent years opening balance is previous year closing balance.

Line 74

*Run off on RPI inflated 2020 RCV ~ wastewater network plus*

Copied from WWn5 line 5.

Line 75

*Wastewater network plus RCV RPI inflated ~ 31 March (closing balance)*

Calculated. Closing balance = Opening balance minus run off.

Line 76

*Wastewater network plus RCV CPIH inflated ~ 1 April (opening balance)*

Calculated. Opening 2020 RCV split 50%:50% to RPI and CPIH inflation pools in first year. Subsequent years opening balance is previous year closing balance.

Line 77

*Run off on CPIH inflated 2020 RCV ~ wastewater network plus*

Copied from WWn5 line 7.

Line 78

*Wastewater network plus RCV CPIH inflated ~ 31 March (closing balance)*

Calculated. Closing balance = Opening balance minus run off.

Line 79

*Wastewater network plus post 2020 investment CPIH inflated ~ 1 April (opening balance)*

New additions opening balance is zero.

Line 80

*Wastewater network plus post 2020 totex additions CPIH inflated*

WWS1 line 21 \* (1 - WWn 6 line 14).

Line 81

*Run off on post 2020 totex additions ~ wastewater network plus*

Copied from WWn5 line 3.

Line 82

*Wastewater network plus post 2020 investment CPIH inflated ~ 31 March (closing balance)*

Calculated. Closing balance = Opening balance plus totex additions minus run off.

Line 83 - 101

This section does not apply to us

Line 102

*Wholesale water resources RCV at 31 March ~ RPI indexed*

Copy from RPI indexed RCV lines in block B.

Line 103

*Wholesale water network plus RCV at 31 March ~ RPI indexed*

## Welsh Water Appointed Business Tables Commentaries

Copy from RPI indexed RCV lines in block B.

Line 104

*Wholesale wastewater network plus RCV at 31 March ~ RPI indexed*

Copy from RPI indexed RCV lines in block B.

Line 105

*Wholesale bioresources RCV at 31 March ~ RPI indexed*

Copy from RPI indexed RCV lines in block B.

Line 106

*Wholesale dummy RCV at 31 March ~ RPI indexed*

Copy from RPI indexed RCV lines in block B.

Line 107

*Total wholesale RCV at 31 March ~ RPI indexed*

Sum lines in block C.

Line 108

*Wholesale water resources RCV at 31 March ~ CPIH indexed*

Calculated. Sum of two CPIH indexed RCV lines in block B.

Line 109

*Wholesale water network plus RCV at 31 March ~ CPIH indexed*

Calculated. Sum of two CPIH indexed RCV lines in block B.

Line 110

*Wholesale wastewater network plus RCV at 31 March ~ CPIH indexed*

Calculated. Sum of two CPIH indexed RCV lines in block B.

Line 111

*Wholesale bioresources RCV at 31 March ~ CPIH indexed*

Calculated. Sum of two CPIH indexed RCV lines in block B.

Line 112

*Wholesale dummy RCV at 31 March ~ CPIH indexed*

Calculated. Sum of two CPIH indexed RCV lines in block B.

Line 113

*Total wholesale RCV at 31 March ~ CPIH indexed*

Sum lines in block D.

Line 114

*Total wholesale RCV at 31 March*

Calculated. Sum of total lines in blocks C and D.

## App9 - Adjustments to RCV from disposals of interest in land

### Line 1 - Forecast at previous review

*The water share of the forecast used for 2014-15 in the PR14 final determination RCV midnight adjustment model.*

Data is obtained from A7 of the PR14 May Submission "AA\_pr14postrbrtbales.xlsx"

### Line 2 – Actual and current forecast sales

*Proceeds from land sales (net of associated offsetting costs). For 2014-15 to 2017-18 input actual data reported in RAG 4 table 2E. Forecasts are required for 2018-20.*

Historical data is obtained from the Annual Performance Report table 2E. Data for 2014-15 is obtained from A11 of the Regulatory Accounts Data Tables. The data for 2014-15 is split between water and wastewater 71% and 29% respectively in line with the PR14 split. Forecasts are based on historical performance and expected land sales.

The value for 2014-15 has changed since this table was submitted in July. The value has changed from £0.000k to £33.370k

### Line 3 – Impact of 50% of proceeds

*Calculated. Half of the proceeds from land sales*

Calculation.

### Line 4 - WACC - fully post tax on notional structure

*Real fully post tax WACC that applied at PR14.*

Pre-populated. PR14 post tax WACC.

### Line 5 - RPI: Financial year average year on year %

*Calculated. Average of the year on year % change in the financial year average RPI for the 2015-20 period.*

Calculation.

### Line 6 - Discount rate (nominal)

*Calculated. The discount rate is the sum of the WACC and the RPI forecast.*

Calculation.

### Line 7 - Years for discounting purposes

*Generic values*

Pre-populated.

### Line 8 - Discount factor

*Calculated. The discount factor based on the discount rate and is centred on the base year*

Calculation.

### Line 9 - PV effect of 50% of proceeds from disposals of interest in land

*Calculated. Present value of half of the cash flow arising from the land sales using the service specific discount factor.*

Calculation.

### Line 10 - NPV effect of 50% of proceeds from disposals of interest in land

*Calculated. The net present value adjustment for the RCV. This is the sum of the present values with signage reversed.*

Calculation.

Line 11 - Water ~ NPV effect of 50% of proceeds from disposals of interest in land at 2017-18 FYA  
CPIH deflated price base

*This is an output from the RCV adjustments model*

Output from the RCV feeder model.

Line 12 - Forecast at previous review

*The wastewater share of the forecast used for 2014-15 in the PR14 final determination RCV midnight adjustment model*

Data is obtained from A7 of the PR14 May Submission "AA\_pr14postrbrtables.xlsm.

Line 13 - Actual and current forecast sales

*Proceeds from land sales (net of associated offsetting costs). For 2014-15 to 2017-18 input actual data reported in RAG 4 table 2E. Forecasts are required for 2018-20*

Historical data is obtained from the Annual Performance Report table 2E. Data for 2014-15 is obtained from A11 of the Regulatory Accounts Data Tables. The data for 2014-15 is split between water and wastewater 71% and 29% respectively in line with the PR14 split. Forecasts are based on historical performance and expected land sales.

The value for 2014-15 has changed since this table was submitted in July. The value has changed from £0.000k to £13.630k

Line 14 - Impact of 50% of proceeds

*Calculated. Half of the proceeds from land sales.*

Calculation.

Line 15 - WACC - fully post tax on notional structure

*Real fully post tax WACC that applied at PR14.*

Pre-populated. PR14 post tax WACC.

Line 16 - RPI: Financial year average year on year %

*Calculated. Average of the year on year % change in the financial year average RPI for the 2015-20 period*

Calculation.

Line 17 - Discount rate (nominal)

*Calculated. The discount rate is the sum of the WACC and the RPI forecast*

Calculation.

Line 18 - Years for discounting purposes

*Generic values*

Pre-populated.

Line 19 - Discount factor

*Calculated. The discount factor based on the discount rate and is centred on the base year*

Calculation.

Line 20 - PV effect of 50% of proceeds from disposals of interest in land

*Calculated. Present value of half of the cash flow arising from the land sales using the service specific discount factor.*

Calculation.

## Welsh Water Appointed Business Tables Commentaries

Line 21 - NPV effect of 50% of proceeds from disposals of interest in land

*Calculated. The net present value adjustment for the RCV. This is the sum of the present values with signage reversed*

Calculation.

Line 22 - Wastewater ~ NPV effect of 50% of proceeds from disposals of interest in land at 2017-18 FYA CPIH deflated price base

*This is an output from the RCV adjustments model*

Output from the RCV feeder model.

## App10 - Financial ratios

### Table overview

This table contains the financial ratios used in the financeability assessment for the business plan. Details of our detailed assessment are contained in Supporting Document 4.3 PR19 Financial resilience.

In addition to the metrics prescribed by the table and calculated in the financial model, we have included four company proposed financial ratios.

For both the Notional and Actual company:

- 1) a cash dividend cover ratio;

For the Actual company only:

- 2) an alternative gearing calculation, used by the CTA;
- 3) an alternative adjusted interest cover ratio which mirrors the adjustment Moody's credit rating agency make in arriving at our actual ratios;
- 4) an alternative funds from operations (FFO) / Net debt ratio which mirrors the adjustments Standard and Poors' credit rating agency make in arriving at our actual ratios.

### Block A - Financial ratios ~ Notional capital structure

For the financeability assessment we have **excluded** the PR14 revenue adjustments (post-financeability adjustments) from the calculations. The financial statement tables (App11, App11a, App12, App12a, App15, App15a, in our business plan data tables file include the post-financeability adjustments. All ratios in App10 **exclude** post-financeability adjustments.

For ease of reconciliation with the PR19 data tables (as referenced in the calculations set out below) we have shown separately for the notional company the impact of removing these items on revenues, interest and cash. The overall impact is, however, not material.

<b>Revenue (outturn prices)</b>	<b>2021 £m</b>	<b>2022 £m</b>	<b>2023 £m</b>	<b>2024 £m</b>	<b>2025 £m</b>
App11a	759.893	781.843	804.805	829.198	853.855
Excluding revenue adjustments	758.120	780.035	802.961	827.316	851.936
<i>Difference</i>	<i>(1.773)</i>	<i>(1.808)</i>	<i>(1.844)</i>	<i>(1.882)</i>	<i>(1.919)</i>

<b>Revenue (outturn prices)</b>	<b>2021 £m</b>	<b>2022 £m</b>	<b>2023 £m</b>	<b>2024 £m</b>	<b>2025 £m</b>
App11a	760.010	782.474	805.800	830.282	855.009
Excluding revenue adjustments	751.897	783.017	807.984	829.009	852.990
<i>Difference</i>	<i>-8.113</i>	<i>0.543</i>	<i>2.184</i>	<i>-1.273</i>	<i>-2.019</i>

<b>Post financeability adjustment (outturn price)</b>	<b>2021 £m</b>	<b>2022 £m</b>	<b>2023 £m</b>	<b>2024 £m</b>	<b>2025 £m</b>
Revenue adjustments feeder model	1.755	1.790	1.826	1.862	1.899
Retail margin on adjustments (calculated in financial model)	0.018	0.019	0.019	0.019	0.020
<i>Total revenue adjustment</i>	<i>1.773</i>	<i>1.808</i>	<i>1.844</i>	<i>1.882</i>	<i>1.919</i>

Welsh Water Appointed Business Tables Commentaries

<b>Post financeability adjustment (outurn price)</b>	<b>2021 £m</b>	<b>2022 £m</b>	<b>2023 £m</b>	<b>2024 £m</b>	<b>2025 £m</b>
Revenue adjustments feeder model	1.755	1.790	1.826	1.862	1.899
Retail margin on adjustments (calculated in financial model)	0.018	0.019	0.019	0.019	0.020
Revenue Smoothing and NPV	-9.886	-1.266	0.339	-3.154	-3.938
<b>Total revenue adjustment</b>	<b>-8.113</b>	<b>0.543</b>	<b>2.184</b>	<b>-1.273</b>	<b>-2.019</b>

<b>Cash and cash equivalents</b>	<b>2021 £m</b>	<b>2022 £m</b>	<b>2023 £m</b>	<b>2024 £m</b>	<b>2025 £m</b>
App12a	104.677	267.771	426.112	554.722	665.808
Excluding revenue adjustments	106.178	270.984	431.141	561.678	674.801
<i>Difference</i>	1.501	3.213	5.029	6.956	8.993

<b>Cash and cash equivalents</b>	<b>2021 £m</b>	<b>2022 £m</b>	<b>2023 £m</b>	<b>2024 £m</b>	<b>2025 £m</b>
App12a	90.996	240.785	384.697	497.987	592.491
Excluding revenue adjustments	98.663	248.464	390.347	504.809	601.414
<i>Difference</i>	<b>7.667</b>	<b>7.679</b>	<b>5.65</b>	<b>6.822</b>	<b>8.923</b>

<b>Net cash generated in operating activities</b>	<b>2021 £m</b>	<b>2022 £m</b>	<b>2023 £m</b>	<b>2024 £m</b>	<b>2025 £m</b>
App15a	296.743	276.310	294.818	310.924	326.198
Excluding revenue adjustments	295.242	274.597	293.003	308.998	324.160
<i>Difference</i>	-1.501	-1.713	-1.815	-1.926	-2.038

<b>Net cash generated in operating activities</b>	<b>2021 £m</b>	<b>2022 £m</b>	<b>2023 £m</b>	<b>2024 £m</b>	<b>2025 £m</b>
App15a	321.069	300.369	320.111	337.203	353.839
Excluding revenue adjustments	313.402	300.357	322.14	336.034	351.736
<i>Difference</i>	<b>-7.667</b>	<b>-0.012</b>	<b>2.029</b>	<b>-1.169</b>	<b>-2.103</b>

<b>Interest expense</b>					
App11a	-135.408	-143.950	-151.720	-158.761	-164.812
Excluding revenue adjustments	-135.424	-144.033	-151.878	-158.998	-165.134
<i>Difference</i>	<b>-0.016</b>	<b>-0.083</b>	<b>-0.158</b>	<b>-0.237</b>	<b>-0.322</b>

<b>Interest expense</b>	<b>2021 £m</b>	<b>2022 £m</b>	<b>2023 £m</b>	<b>2024 £m</b>	<b>2025 £m</b>
App11a	-158.731	-167.241	-175.115	-182.250	-188.367
Excluding revenue adjustments	-158.884	-167.542	-175.38	-182.501	-188.684
<i>Difference</i>	<b>-0.153</b>	<b>-0.301</b>	<b>-0.265</b>	<b>-0.251</b>	<b>-0.317</b>

<b>Profit after tax</b>					
App11a	35.668	28.630	29.918	37.130	41.432
Excluding revenue adjustments	34.050	26.920	28.107	35.212	39.404
<i>Difference</i>	<b>-1.618</b>	<b>-1.710</b>	<b>-1.811</b>	<b>-1.918</b>	<b>-2.028</b>

<b>Profit after tax</b>	<b>2021 £m</b>	<b>2022 £m</b>	<b>2023 £m</b>	<b>2024 £m</b>	<b>2025 £m</b>
App11a	44.823	45.705	58.661	73.554	90.734
Excluding revenue adjustments	36.739	46.122	60.764	72.231	88.61
<i>Difference</i>	<b>-8.084</b>	<b>0.417</b>	<b>2.103</b>	<b>-1.323</b>	<b>-2.124</b>

### Line 1 - Gearing

*Net debt/RCV (calculated at year end)*

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
Cash and cash equivalents – adjusted	106.178	270.984	431.141	561.678	674.801
Borrowing App12a	3,680.393	3,716.541	3,753.774	3,792.123	3,831.623
<b>Net debt</b>	<b>3,786.571</b>	<b>3,987.525</b>	<b>4,184.915</b>	<b>4,353.801</b>	<b>4,506.424</b>
<b>RCV (year-end)</b>	<b>6,245.748</b>	<b>6,535.901</b>	<b>6,832.164</b>	<b>7,107.273</b>	<b>7,373.851</b>
<b>Gearing</b>	<b>60.63%</b>	<b>61.01%</b>	<b>61.25%</b>	<b>61.26%</b>	<b>61.11%</b>

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
Cash and cash equivalents - adjusted	98.626	248.449	390.291	504.743	601.338
Borrowing App12a	3,680.393	3,716.541	3,753.774	3,792.123	3,831.623
<b>Net debt</b>	<b>3,779.019</b>	<b>3,964.990</b>	<b>4,144.065</b>	<b>4,296.866</b>	<b>4,432.961</b>
<b>RCV (year-end)</b>	<b>6,251.37</b>	<b>6,543.97</b>	<b>6,842.48</b>	<b>7,119.67</b>	<b>7,387.85</b>
<b>Gearing</b>	<b>60.45%</b>	<b>60.59%</b>	<b>60.56%</b>	<b>60.35%</b>	<b>60.00%</b>

### Line 2 - Interest cover

*FFO (pre interest)/cash interest - NOTE:FFO is calculated before changes in working capital*

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
Cash generated from operations adjusted	295.242	274.597	293.003	308.998	324.16
Less Changes in working capital – inventories, trade and other receivables	-3.835	-1.249	-0.098	1.787	1.679
Less Changes in working capital – trade and other payables	23.148	-3.247	2.58	0.06	1.361
<b>FFO (post-interest)</b>	<b>275.929</b>	<b>279.093</b>	<b>290.521</b>	<b>307.151</b>	<b>321.12</b>
Less Net interest paid adjusted	135.424	144.033	151.878	158.998	165.134
<b>FFO (pre-interest)</b>	<b>411.353</b>	<b>423.126</b>	<b>442.399</b>	<b>466.149</b>	<b>486.254</b>
<b>Interest cover</b>	<b>3.04</b>	<b>2.94</b>	<b>2.91</b>	<b>2.93</b>	<b>2.94</b>

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
Cash generated from operations adjusted	313.438	300.336	322.181	336.043	351.747
Less Changes in working capital - inventories, trade and other receivables	7.809	-2.491	-0.432	1.71	1.416
Less Changes in working capital – trade and other payables	13.605	-2.620	2.491	-0.335	1.099
<b>FFO (post-interest)</b>	<b>292.024</b>	<b>305.447</b>	<b>320.122</b>	<b>334.668</b>	<b>349.232</b>

Less Net interest paid adjusted	123.789	131.392	138.147	144.149	149.181
FFO (pre-interest)	415.813	436.839	458.269	478.817	498.413
<b>Interest cover</b>	<b>3.36</b>	<b>3.33</b>	<b>3.32</b>	<b>3.32</b>	<b>3.34</b>

### Line 3 - Adjusted cash interest cover

(FFO (pre interest) - capital charges) / interest paid on debt (excluding the accretion of index linked debt)

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
Funds from operations (pre-interest)	411.353	423.126	442.398	466.149	486.254
Less Capital Charges:					
— RCV depreciation	219.872	231.556	242.412	252.962	262.971
	<b>191.481</b>	<b>191.570</b>	<b>199.986</b>	<b>213.187</b>	<b>223.283</b>
Interest expense adjusted	135.424	144.033	151.878	158.998	165.134
<b>Adjusted interest cover</b>	<b>1.41</b>	<b>1.33</b>	<b>1.32</b>	<b>1.34</b>	<b>1.35</b>

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
Funds from operations (pre-interest)	415.813	436.839	458.269	478.817	498.413
Less Capital Charges:					
RCV depreciation	219.988	231.839	242.789	253.424	263.505
	<b>195.825</b>	<b>205</b>	<b>215.48</b>	<b>225.393</b>	<b>234.908</b>
Interest expense adjusted	123.789	131.392	138.147	144.149	149.181
<b>Adjusted interest cover</b>	<b>1.58</b>	<b>1.56</b>	<b>1.56</b>	<b>1.56</b>	<b>1.57</b>

### Line 4 - Adjusted cash interest cover (alternative calculation)

(FFO (pre interest) - capital charges - excess fast money) / interest paid on debt (excluding the accretion of index linked debt)

We have used a natural PAYG rate in building our PR19 plan. Therefore excess fast money should be nil. The values of excess fast money calculated by the model are due to the natural PAYG rate being rounded to 2 decimal places.

These amounts of excess fast money do not alter the adjusted interest cash interest cover ratio from the values in Line3.

<i>Outturn prices</i>	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
Excess fast money	-	-	0.022	0.006	0.030

The effects of using these values in the adjusted cash interest cover calculation is as follows:

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
Funds from operations (pre-interest) less RCV depreciation	195.825	205	215.48	225.393	234.908

Less Excess Fast Money	14.15	11.935	11.991	12.087	11.916
	<b>181.675</b>	<b>193.065</b>	<b>203.489</b>	<b>213.306</b>	<b>222.992</b>
Interest expense adjusted	123.789	131.392	138.147	144.149	149.181
Adjusted interest cover	<b>1.47</b>	<b>1.47</b>	<b>1.47</b>	<b>1.48</b>	<b>1.49</b>

### Line 5 - FFO/Net Debt

FFO (post interest) / net debt (Where net debt is used in these calculations it excludes pension liabilities)

This line contains a percentage which shows the forecast funds from operations (FFO) as a proportion of net debt in each year of AMP7. Unlike the calculations lines 2 to 4, FFO here is post-interest. The below table shows how the figures have been calculated.

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
FFO (post interest)	275.928	279.093	290.521	307.151	321.121
Net debt (adjusted for difference in cash and cash equivalents)	3,786.571	3,987.525	4,184.915	4,353.801	4,506.424
<b>FFO/net debt</b>	<b>7.29%</b>	<b>7.00%</b>	<b>6.94%</b>	<b>7.05%</b>	<b>7.13%</b>

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
FFO (post-interest)	292.024	305.447	320.122	334.668	349.232
Net debt (adjusted for difference in cash and cash equivalents)	3,779.02	3,964.99	4,144.07	4,296.87	4,432.96
<b>FFO/net debt</b>	<b>7.73%</b>	<b>7.70%</b>	<b>7.72%</b>	<b>7.79%</b>	<b>7.88%</b>

### Line 6 - FFO/Net Debt (alternative calculation)

FFO (post interest) - accretion of index linked debt / net debt

This line reports the alternative calculation for the ratio in line 5, where our forecast funds from operations are adjusted for indexation of index-linked loans.

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
FFO (post interest)	275.928	279.093	290.521	307.151	321.121
Less Indexation of linked loans	35.095	36.148	37.233	38.350	39.500
	240.833	242.945	253.288	268.801	281.621
Net debt (adjusted for difference in cash and cash equivalents)	3,786.571	3,987.525	4,184.915	4,353.801	4,506.424
<b>FFO/net debt</b>	<b>6.36%</b>	<b>6.09%</b>	<b>6.05%</b>	<b>6.17%</b>	<b>6.25%</b>

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
FFO (post-interest)	292.024	305.447	320.122	334.668	349.232
Less Indexation of linked loans	35.095	36.148	37.233	38.350	39.500
	256.929	269.299	282.889	296.318	309.732
Net debt (adjusted for difference in cash and cash equivalents)	3,779.02	3,964.99	4,144.07	4,296.87	4,432.96
<b>FFO/net debt</b>	<b>6.80%</b>	<b>6.79%</b>	<b>6.83%</b>	<b>6.90%</b>	<b>6.99%</b>

### Line 7 - Dividend cover

*Profit after tax / dividends paid*

This line reports our forecast dividend cover in each year of AMP7, calculated as profit after tax divided by dividends paid:

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
Profit after tax (adjusted)	34.050	26.920	28.107	35.212	39.404
Dividends	61.503	64.289	67.201	70.245	73.427
<b>Dividend cover</b>	<b>0.55</b>	<b>0.42</b>	<b>0.42</b>	<b>0.50</b>	<b>0.54</b>

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
Profit after tax (adjusted)	36.738	46.123	60.763	72.233	88.613
Dividends	61.473	64.226	67.103	70.108	73.248
<b>Dividend cover</b>	<b>0.60</b>	<b>0.72</b>	<b>0.91</b>	<b>1.03</b>	<b>1.21</b>

We have include in line 13 a cash interest cover ratio which we consider a more appropriate metric for our business.

### Line 8 RCF/Net Debt

*(FFO (post interest) - dividends paid) / net debt*

This line contains a percentage which represents our forecast retained cash flow as a proportion of net debt in each year of AMP7. Retained cash flow is calculated as funds from operations less dividends paid. The below table shows how the figures are derived.

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
FFO (post-interest)	275.928	279.093	290.521	307.151	321.121
Less Dividend paid	61.503	64.289	67.201	70.245	73.427
	214.425	214.804	223.32	236.906	247.694
Net debt (adjusted for difference in cash and cash equivalents)	3,786.571	3,987.525	4,184.915	4,353.801	4,506.424
<b>RCF/net debt</b>	<b>5.66%</b>	<b>5.39%</b>	<b>5.34%</b>	<b>5.44%</b>	<b>5.50%</b>

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
FFO (post-interest)	292.024	305.447	320.122	334.668	349.232
Less Dividend paid	61.473	64.226	67.103	70.108	73.248
	230.551	241.221	253.019	264.56	275.984
Net debt (adjusted for difference in cash and cash equivalents)	3,779.02	3,964.99	4,144.07	4,296.87	4,432.96
<b>RCF/net debt</b>	<b>6.10%</b>	<b>6.08%</b>	<b>6.11%</b>	<b>6.16%</b>	<b>6.23%</b>

### Line 9 RCF/Capex

*(FFO (post interest) - dividends paid) / capex*

This line contains a percentage which represents our forecast retained cash flow as a proportion of capital investment in each year of AMP7. Retained cash flow is calculated as funds from operation less dividends declared. The below table shows how the figures are derived.

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
FFO (post-interest)	275.928	279.093	290.521	307.151	321.121
Less Dividend paid	61.503	64.289	67.201	70.245	73.427
	214.425	214.804	223.320	236.906	247.694
Capex	439.917	375.115	385.959	369.290	363.857
<b>RCF/Capex</b>	<b>48.74%</b>	<b>57.26%</b>	<b>57.86%</b>	<b>64.15%</b>	<b>68.07%</b>

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
FFO (post-interest)	292.024	305.447	320.122	334.668	349.232
Less Dividend paid	61.473	64.226	67.103	70.108	73.248
	230.551	241.221	253.019	264.56	275.984
Capex	450.591	385.933	396.919	380.388	375.094
<b>RCF/Capex</b>	<b>51.17%</b>	<b>62.50%</b>	<b>63.75%</b>	<b>69.55%</b>	<b>73.58%</b>

### Line 10 Return on capital employed

*(EBIT - tax) / RCV*

This line contains a percentage that represents our forecast return on capital employed, being earnings before interest less current tax charge divided by the regulatory capital value. EBIT less current tax charge is calculated as operating profit plus other income.

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
EBIT less current tax charge (adjusted)	233.875	233.256	241.185	253.956	262.994
RCV (year-average)	6,245.748	6,535.901	6,832.164	7,107.273	7,373.851
<b>ROCE</b>	<b>3.74%</b>	<b>3.57%</b>	<b>3.53%</b>	<b>3.57%</b>	<b>3.57%</b>

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
EBIT less current tax charge (adjusted)	218.211	234.711	257.4	275.021	297.748
RCV (year-average)	6,251.37	6,543.97	6,842.48	7,119.67	7,387.85
<b>ROCE</b>	<b>3.49%</b>	<b>3.59%</b>	<b>3.76%</b>	<b>3.86%</b>	<b>4.03%</b>

### Line 11 RORE

*RORE calculates the returns on a regulatory basis by reference to the notional gearing level and average RCV for each year. The base RORE is calculated using the regulatory building blocks and should also reflect the impact of any legacy adjustments to revenue.*

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m

## Welsh Water Appointed Business Tables Commentaries

<b>Base Regulated Equity</b>					
Water Resources	86.583	98.848	114.315	128.582	139.612
Water Network +	721.960	775.588	828.627	879.396	929.607
Wastewater Network +	1,555.894	1,618.382	1,667.542	1,717.226	1,764.971
Bioresources	93.593	94.344	95.086	95.789	96.207
<b>Appointee Base Regulated Equity</b>	<b>2,458.030</b>	<b>2,587.162</b>	<b>2,705.570</b>	<b>2,820.993</b>	<b>2,930.397</b>
<b>Total Base RoRE</b>					
Water Resources	3.725	4.314	5.057	5.741	6.271
Water Network +	31.022	33.63	36.209	38.68	41.123
Wastewater Network +	66.723	69.727	72.093	74.484	76.782
Bioresources	4.012	4.063	4.114	4.163	4.197
<b>Earnings after Tax (EAT) – Retail</b>	<b>6.726</b>	<b>7.299</b>	<b>7.693</b>	<b>8.234</b>	<b>8.884</b>
Total Base Return	<b>112.208</b>	<b>119.033</b>	<b>125.166</b>	<b>131.302</b>	<b>137.257</b>
<b>RORE</b>	<b>4.56%</b>	<b>4.60%</b>	<b>4.63%</b>	<b>4.65%</b>	<b>4.68%</b>

	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>
<b>Base Regulated Equity</b>					
Water Resources	86.587	98.861	114.339	128.617	139.657
Water Network +	723.006	778.089	831.855	883.242	933.915
Wastewater Network +	1555.961	1618.607	1667.965	1717.884	1765.891
Bioresources	93.6	94.365	95.119	95.834	96.264
<b>Appointee Base Regulated Equity</b>	<b>2,459.154</b>	<b>2,589.922</b>	<b>2,709.278</b>	<b>2,825.577</b>	<b>2,935.727</b>
<b>Total Base RoRE</b>					
Water Resources	3.725	4.315	5.058	5.743	6.274
Water Network +	31.072	33.75	36.364	38.864	41.329
Wastewater Network +	66.726	69.738	72.113	74.515	76.826
Bioresources	4.012	4.064	4.116	4.165	4.2
<b>Earnings after Tax (EAT) - Retail</b>	<b>6.651</b>	<b>7.685</b>	<b>8.2</b>	<b>8.787</b>	<b>9.489</b>
Total Base Return	<b>112.186</b>	<b>119.552</b>	<b>125.851</b>	<b>132.074</b>	<b>138.118</b>
<b>RORE</b>	<b>4.56%</b>	<b>4.62%</b>	<b>4.65%</b>	<b>4.67%</b>	<b>4.70%</b>

### Line 12 Target Credit Rating

Please set out what level of credit rating you are targeting, including the name of the relevant credit rating agency.

For the notional company we are targeting secure corporate investment grade credit rating which we interpret as **Baa2/BBB/BBB Baa1/BBB+/BBB+** credit rating from Moody's, Standard and Poors' and Fitch respectively, being **one notch two notches** above the minimum investment grade.

### Line 13 Company proposed financial ratio A: Cash dividend cover

The company's proposed financial ratio A.

We have included a cash dividend cover ratio which we deem more appropriate than the standard dividend cover ratio for this business.

	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>
Net cash generated (adjusted)	295.242	274.597	293.003	308.998	324.16
Dividends paid (absolute value)	61.503	64.289	67.201	70.245	73.427
Cash dividend cover	<b>4.80</b>	<b>4.27</b>	<b>4.36</b>	<b>4.40</b>	<b>4.41</b>

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
Net cash generated (adjusted)	313.438	300.336	322.181	336.043	351.747
Dividends paid (absolute value)	61.473	64.226	67.103	70.108	73.248
Cash dividend cover	5.10	4.68	4.80	4.79	4.80

### Lines 14-22 Company proposed financial ratio

*The company's proposed financial ratio B - J*

We have not proposed any other financial ratios.

### Block B – Financial Ratios ~ Actual capital structure

Note that we have prepared the actual company ratios **excluding** the impact of the PR14 revenue adjustments on AMP7 annual cash flows. For ease of reconciliation with the PR19 actual company appointee data tables (as referenced in the calculations set out below) we have shown separately the impact of removing these items on revenues, interest and borrowings. The overall impact is, however, not material.

### Line 23 – Gearing

*Net debt/RCV (calculated at year end)*

This line reports Ofwat's calculation of regulatory gearing using 31 March forecast values for each year from 2020-21 to 2024-25 inclusive.

Net debt is calculated by reference to the balance sheet (App12), being total borrowings less cash and cash equivalents.

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
App12 C15 Borrowings	65.879	52.299	56.427	256.819	349.869
App12 E22 Borrowings	<del>3,755.164</del> 3,768.020	<del>3,936.149</del> 3,948.773	<del>4,091.331</del> 4,103.347	<del>4,016.960</del> 4,028.261	<del>4,054.317</del> 4,064.810
Impact of removing PR14 revenue adjustment	1.800 8.239	3.692 7.943	5.679 5.974	7.766 7.451	9.955 9.733
App12 B11 Cash and cash equivalents	(100.000)	(100.000)	(100.000)	(100.000)	(100.000)
Net debt	<del>3,722.843</del> 3,742.138	<del>3,892.140</del> 3,909.015	<del>4,053.437</del> 4,065.748	<del>4,181.545</del> 4,192.531	<del>4,314.141</del> 4,324.412
Regulatory capital value	6,246.000 6,251.374	6,536.000 6,543.965	6,832.000 6,842.479	7,107.000 7,119.673	7,374.000 7,387.850
App10 B23 Gearing	<del>59.60%</del> 59.86%	<del>59.55%</del> 59.73%	<del>59.33%</del> 59.42%	<del>58.84%</del> 58.89%	<del>58.50%</del> 58.53%

**Line 24 – Interest cover**

*FFO(pre-interest)/cash interest – note: FFO is calculated before changes in working capital.*

Interest cover has been calculated using App15 C9, Cash generated from operations as the base, with adjustments made to remove changes in working capital as below. Note that changes in retirement benefit obligations and movements in provisions are therefore included in FFO.

The definition refers to cash interest as opposed to interest payable, and as a result the calculation uses App15 D10, Net interest paid.

		2020-21	2021-22	2022-23	2023-24	2024-25
		£m	£m	£m	£m	£m
App15 C9	Cash generated from operations	418.345	426.559	446.709	472.002	492.746
		428.253	437.990	458.645	484.164	505.118
	<i>Exclude working capital movements:</i>					
App15 B5	Changes in working capital ~ Inventories, trade and other receivables	(3.530)	1.274	0.145	(1.449)	(1.512)
		(3.529)	1.273	0.146	(1.450)	(1.513)
App15 B6	Changes in working capital ~ Trade and other payables	(0.657)	(1.751)	(1.381)	(1.182)	(1.588)
		0.220	(1.738)	(1.370)	(1.171)	(1.577)
	Remove PR14 revenue adjustment	(1.773)	(1.808)	(1.844)	(1.882)	(1.919)
		(8.111)	0.545	2.186	(1.271)	(2.017)
	<b>FFO</b>	<b>412.385</b>	<b>424.274</b>	<b>443.629</b>	<b>467.489</b>	<b>487.727</b>
		<b>416.833</b>	<b>438.070</b>	<b>459.607</b>	<b>480.272</b>	<b>500.011</b>
App15 D10	Net interest paid	156.249	145.702	150.995	155.574	184.224
		156.629	146.091	151.372	155.929	184.556
	Impact of removing PR14 revenue adjustment	0.027	0.083	0.142	0.205	0.270
		0.125	0.246	0.212	0.205	0.263
	<b>Adjusted interest paid</b>	<b>156.276</b>	<b>145.785</b>	<b>151.137</b>	<b>155.779</b>	<b>184.494</b>
		<b>156.754</b>	<b>146.337</b>	<b>151.584</b>	<b>156.134</b>	<b>184.819</b>
	<b>Interest cover</b>	<b>2.64</b>	<b>2.91</b>	<b>2.94</b>	<b>3.00</b>	<b>2.64</b>
		<b>2.66</b>	<b>2.99</b>	<b>3.03</b>	<b>3.08</b>	<b>2.71</b>

**Line 25 – Adjusted cash interest cover**

*(FFO(pre-interest) – capital charges)/interest paid on debt (excluding the accretion of index-linked debt)*

FFO has been calculated as in App10 B24 above, but with capital charges deducted - these are assumed to be the RCV run-off and depreciation charges and the portion of IRE expensed to the income statement in the year.

The definition requires interest paid on debt and the calculation therefore excludes interest received and similar income (note that this is not separately visible in App15 as the table reports interest paid on a net basis).

The value of the indexation adjustment in the calculation is £nil as cash interest paid as reported in the forecast cash flow statement (App 15) does not contain an indexation charge; the adjustment line is therefore shown for completeness only. Cash payments relating to indexation form part of the repayment of index-linked debt principal.

		2020-21	2021-22	2022-23	2023-24	2024-25
		£m	£m	£m	£m	£m
App15 C9	Cash generated from operations	<del>418.345</del> 428.253	<del>426.559</del> 437.990	<del>446.709</del> 458.645	<del>472.002</del> 484.164	<del>492.746</del> 505.118
	<i>Exclude working capital movements:</i>					
App15 B5	Changes in working capital ~ Inventories, trade and other receivables	<del>(3.530)</del> (3.529)	<del>1.274</del> 1.273	<del>0.145</del> 0.146	<del>(1.449)</del> (1.450)	<del>(1.512)</del> (1.513)
App15 B6	Changes in working capital ~ Trade and other payables	<del>(0.657)</del> 0.220	<del>(1.751)</del> (1.738)	<del>(1.381)</del> (1.370)	<del>(1.182)</del> (1.171)	<del>(1.588)</del> (1.577)
	Less capital charges:					
	- RCV run-off/depreciation	<del>(220.052)</del> (219.988)	<del>(231.758)</del> (231.839)	<del>(242.000)</del> (242.789)	<del>(253.206)</del> (253.424)	<del>(263.235)</del> (263.505)
	- IRE expensed	-	-	-	-	-
	Remove PR14 revenue adjustment	<del>(1.773)</del> (8.111)	<del>(1.808)</del> 0.545	<del>(1.844)</del> 2.186	<del>(1.882)</del> (1.271)	<del>(1.919)</del> (2.017)
	<b>Adjusted FFO</b>	<del>192.333</del> <b>196.845</b>	<del>192.516</del> <b>206.231</b>	<del>201.629</del> <b>216.818</b>	<del>214.283</del> <b>226.848</b>	<del>224.492</del> <b>236.506</b>
App15 D10	Net interest paid	<del>156.249</del> 156.629	<del>145.702</del> 146.091	<del>150.995</del> 151.372	<del>155.574</del> 155.929	<del>184.224</del> 184.556
	Impact of removing PR14 revenue adjustment	0.027 0.125	0.083 0.246	0.142 0.212	0.205	0.270 0.263
	Less: indexation	-	-	-	-	-
	<b>Adjusted interest</b>	<del>156.276</del> <b>156.754</b>	<del>145.785</del> <b>146.337</b>	<del>151.137</del> <b>151.584</b>	<del>155.779</del> <b>156.134</b>	<del>184.494</del> <b>184.819</b>
	<b>Adjusted cash interest cover</b>	<del>1.23</del> <b>1.26</b>	<del>1.32</del> <b>1.41</b>	<del>1.33</del> <b>1.43</b>	<del>1.38</del> <b>1.45</b>	<del>1.22</del> <b>1.28</b>

**Line 26 – Adjusted cash interest cover (alternative calculation)**

*(FFO(pre-interest) – capital charges – excess fast money)/interest paid on debt (excluding the accretion of index-linked debt)*

FFO has been calculated as in App10 B25 above, but with the additional deduction of excess fast money.

	2020-21	2021-22	2022-23	2023-24	2024-25	
	£m	£m	£m	£m	£m	
App15 C9	Cash generated from operations	418.345	426.559	446.709	472.002	492.746
		428.253	437.990	458.645	484.164	505.118
	Exclude working capital movements:					
App15 B5	Changes in working capital ~ Inventories, trade and other receivables	(3.530)	1.274	0.145	(1.449)	(1.512)
		(3.529)	1.273	0.146	(1.450)	(1.513)
App15 B6	Changes in working capital ~ Trade and other payables	(0.657)	(1.751)	(1.381)	(1.182)	(1.588)
		0.220	(1.738)	(1.370)	(1.171)	(1.577)
	Less capital charges:					
	- RCV run-off/depreciation	(220.052)	(231.758)	(242.000)	(253.206)	(263.235)
		(219.998)	(231.839)	(242.789)	(253.424)	(263.505)
	- IRE expensed	-	-	-	-	-
	- Excess fast money	-	-	(0.022)	(0.006)	(0.030)
		(14.150)	(11.935)	(11.992)	(12.087)	(11.916)
	Remove PR14 revenue adjustment	(1.773)	(1.808)	(1.844)	(1.882)	(1.919)
		(8.111)	0.545	2.186	(1.271)	(2.017)
	<b>Adjusted FFO</b>	<b>192.333</b>	<b>192.516</b>	<b>201.607</b>	<b>214.276</b>	<b>224.462</b>
		<b>182.695</b>	<b>194.296</b>	<b>204.826</b>	<b>214.761</b>	<b>224.590</b>
App15 D10	Net interest paid	156.249	145.702	150.995	155.574	184.224
		156.629	146.091	151.372	155.929	184.556
	Impact of removing PR14 revenue adjustment	0.027	0.083	0.142	0.205	0.270
		0.125	0.246	0.212	0.205	0.263
	Less: indexation	-	-	-	-	-
	<b>Adjusted interest</b>	<b>156.276</b>	<b>145.785</b>	<b>151.137</b>	<b>155.779</b>	<b>184.494</b>
		<b>156.754</b>	<b>146.337</b>	<b>151.584</b>	<b>156.134</b>	<b>184.819</b>
	<b>Adjusted cash interest cover (alternative calculation)</b>	<b>1.23</b>	<b>1.32</b>	<b>1.33</b>	<b>1.38</b>	<b>1.22</b>
		<b>1.17</b>	<b>1.33</b>	<b>1.35</b>	<b>1.38</b>	<b>1.22</b>

**Line 27 – FFO/net debt**

*FFO(post-interest)/net debt (Where net debt is used in these calculations it excludes pension liabilities.)*

FFO has been calculated as in App10 B24 above, but with the additional deduction of net interest paid.

Net debt has been calculated using data taken from the forecast balance sheet (App12), being the net total of cash and cash equivalents and borrowings.

		2020-21	2021-22	2022-23	2023-24	2024-25
		£m	£m	£m	£m	£m
App15 C9	Cash generated from operations	418.345	426.559	446.709	472.002	492.746
		428.253	437.990	458.645	484.164	505.118
	Remove PR14 revenue adjustment	(1.773)	(1.808)	(1.844)	(1.882)	(1.919)
		(8.111)	0.545	2.186	(1.271)	(2.017)
	<i>Exclude working capital movements:</i>					
App15 B5	Changes in working capital ~ Inventories, trade and other receivables	(3.530)	1.274	0.145	(1.449)	(1.512)
		(3.529)	1.273	0.146	(1.450)	(1.513)
App15 B6	Changes in working capital ~ Trade and other payables	(0.657)	(1.751)	(1.381)	(1.182)	(1.588)
		0.220	(1.738)	(1.370)	(1.171)	(1.577)
App15 D10	Net interest paid	(156.249)	(145.702)	(150.995)	(155.574)	(184.224)
		(156.629)	(146.091)	(151.372)	(155.929)	(184.556)
	Impact of removing PR14 revenue adjustment	(0.027)	(0.083)	(0.142)		(0.270)
		(0.125)	(0.246)	(0.212)	(0.205)	(0.263)
	<b>FFO (post interest)</b>	<b>256.109</b>	<b>278.489</b>	<b>292.492</b>	<b>311.710</b>	<b>303.233</b>
		<b>260.079</b>	<b>291.733</b>	<b>308.023</b>	<b>324.138</b>	<b>315.192</b>
App12 B11	Cash and cash equivalents ~ actual company structure	(100.000)	(100.000)	(100.000)	(100.000)	(100.000)
App12 C15	Borrowings	65.879	52.299	56.427	256.819	349.869
App12 E22	Borrowings	3,755.164	3,936.149	4,091.331	4,016.960	4,054.317
		3,768.020	3,948.773	4,103.347	4,028.261	4,064.810
	Impact of removing PR14 revenue adjustment	1.800	3.692	5.679	7.766	9.955
		8.239	7.943	5.974	7.451	9.733
	<b>Net debt</b>	<b>3,722.843</b>	<b>3,892.140</b>	<b>4,053.437</b>	<b>4,181.545</b>	<b>4,314.141</b>
		<b>3,742.138</b>	<b>3,909.015</b>	<b>4,065.748</b>	<b>4,192.531</b>	<b>4,324.412</b>
	<b>FFO/net debt</b>	<b>6.88%</b>	<b>7.16%</b>	<b>7.22%</b>	<b>7.45%</b>	<b>7.03%</b>
		<b>6.95%</b>	<b>7.46%</b>	<b>7.58%</b>	<b>7.73%</b>	<b>7.29%</b>

**Line 28 – FFO/net debt (alternative calculation)**

*FFO (post-interest) – accretion of index-linked debt/net debt*

FFO has been calculated as in App10 B27 above, but with an additional adjustment to remove an indexation charge relating to the accretion of index-linked debt.

The value of the indexation adjustment in the calculation is £nil as cash interest paid as reported in the forecast cash flow statement (App 15) does not contain an indexation charge; the adjustment line is therefore shown for completeness only. Cash payments relating to indexation form part of the repayment of index-linked debt principal.

		2020-21	2021-22	2022-23	2023-24	2024-25
		£m	£m	£m	£m	£m
App15 C9	Cash generated from operations	418.345	426.559	446.709	472.002	492.746
		428.253	437.990	458.645	484.164	505.118
	Remove PR14 revenue adjustment	(1.773)	(1.808)	(1.844)	(1.882)	(1.919)
		(8.111)	0.545	2.186	(1.271)	(2.017)
	<i>Exclude working capital movements:</i>					
App15 B5	Changes in working capital ~ Inventories, trade and other receivables	(3.530)	1.274	0.145	(1.449)	(1.512)
		(3.529)	1.273	0.146	(1.450)	(1.513)
App15 B6	Changes in working capital ~ Trade and other payables	(0.657)	(1.751)	(1.381)	(1.182)	(1.588)
		0.220	(1.738)	(1.370)	(1.171)	(1.577)
App15 D10	Net interest paid	(156.249)	(145.702)	(150.995)	(155.574)	(184.224)
		(156.629)	(146.091)	(151.372)	(155.929)	(184.556)
	Add back indexation	(51.736)	(52.573)	(53.305)	(54.070)	(55.561)
	Impact of removing PR14 revenue adjustment	(0.027)	(0.083)	(0.142)	(0.205)	(0.270)
		(0.125)	(0.246)	(0.212)		(0.263)
	<b>FFO (post interest)</b>	<b>204.373</b>	<b>225.916</b>	<b>239.187</b>	<b>257.640</b>	<b>247.672</b>
		<b>208.343</b>	<b>239.160</b>	<b>254.718</b>	<b>270.068</b>	<b>259.632</b>
App12 B11	Cash and cash equivalents ~ actual company structure	(100.000)	(100.000)	(100.000)	(100.000)	(100.000)
App12 C15	Borrowings	65.879	52.299	56.427	256.819	349.869
App12 E22	Borrowings	3,755.164	3,936.149	4,091.331	4,016.960	4,054.317
		3,768.020	3,948.773	4,103.347	4,028.261	4,064.810
	Impact of removing PR14 revenue adjustment	1.800	3.692	5.679	7.766	9.955
		8.239	7.943	5.974	7.451	9.733
	<b>Net debt</b>	<b>3,722.843</b>	<b>3,892.140</b>	<b>4,053.437</b>	<b>4,181.545</b>	<b>4,314.141</b>
		<b>3,742.138</b>	<b>3,909.015</b>	<b>4,065.748</b>	<b>4,192.531</b>	<b>4,324.412</b>
	<b>FFO/net debt (alternative calculation)</b>	<b>5.49%</b>	<b>5.80%</b>	<b>5.90%</b>	<b>6.16%</b>	<b>5.74%</b>
		<b>5.57%</b>	<b>6.12%</b>	<b>6.26%</b>	<b>6.44%</b>	<b>6.00%</b>

**Line 29 – Dividend cover**

*Profit after tax/dividends paid*

This line reports dividend cover by reference to the income statement (App11), calculated as shown below.

The forecast dividends are legal under the Companies Act 2006, being funded from retained earnings. Note, however, that if we were to adjust App12 and App16 to report the opening balance of fixed assets at historical cost, as opposed to valuation, reported retained earnings would be negative and the dividends would have the appearance of being illegal (in practice we will continue to report assets at revaluation in our statutory accounts under IFRS, and will not be making these payments as real dividends).

	2020-21	2021-22	2022-23	2023-24	2024-25
	£m	£m	£m	£m	£m
App11 A16 Profit for the year	<del>27.853</del>	<del>15.862</del>	<del>64.260</del>	<del>79.876</del>	<del>95.388</del>
	36.537	25.317	74.235	90.137	105.938
Remove PR14 revenue adjustment	(1.773)	(1.808)	(1.844)	(1.882)	(1.919)
	(8.111)	0.545	2.186	(1.271)	(2.017)
Interest impact of removing PR14 revenue adjustment	(0.027)	(0.083)	(0.142)		(0.270)
	(0.125)	(0.246)	(0.212)	(0.205)	(0.263)
Deferred tax on PR14 revenue adjustment removal	<del>0.306</del>	<del>0.321</del>	<del>0.338</del>	<del>0.355</del>	<del>0.372</del>
	1.400	(0.051)	(0.336)	0.251	0.388
Adjusted profit for the year	<del>26.359</del>	<del>14.292</del>	<del>62.612</del>	<del>78.144</del>	<del>93.571</del>
	29.701	25.565	75.874	88.912	104.046
App11 B17 Dividends	14.700	15.800	17.000	18.100	19.300
<b>Dividend cover</b>	<del>1.79</del>	<del>0.90</del>	<del>3.68</del>	<del>4.32</del>	<del>4.85</del>
	2.02	1.62	4.46	4.91	5.39

**Line 30 – RCF/net debt**

*(FFO(post-interest) – dividends paid)/net debt*

Calculated as:

	2020-21	2021-22	2022-23	2023-24	2024-25	
	£m	£m	£m	£m	£m	
App15 C9	Cash generated from operations	418.345	426.559	446.709	472.002	492.746
		428.253	437.990	458.645	484.164	505.118
	Remove PR14 revenue adjustment	(1.773)	(1.808)	(1.844)	(1.882)	(1.919)
		(8.111)	0.545	2.186	(1.271)	(2.017)
	<i>Exclude working capital movements:</i>					
App15 B5	Changes in working capital ~ Inventories, trade and other receivables	(3.530)	1.274	0.145	(1.449)	(1.512)
		(3.529)	1.273	0.146	(1.450)	(1.513)
App15 B6	Changes in working capital ~ Trade and other payables	(0.657)	(1.751)	(1.381)	(1.182)	(1.588)
		0.220	(1.738)	(1.370)	(1.171)	(1.577)
App15 D10	Net interest paid	(156.249)	(145.702)	(150.995)	(155.574)	(184.224)
		(156.629)	(146.091)	(151.372)	(155.929)	(184.556)
	Dividends paid	(14.700)	(15.800)	(17.000)	(18.100)	(19.300)
	Interest impact of removing PR14 revenue adjustment	(0.027)	(0.083)	(0.142)		(0.270)
		(0.125)	(0.246)	(0.212)	(0.205)	(0.263)
	<b>RCF</b>	<b>241.409</b>	<b>262.689</b>	<b>275.492</b>	<b>293.610</b>	<b>283.933</b>
		<b>245.379</b>	<b>275.933</b>	<b>291.023</b>	<b>306.038</b>	<b>295.892</b>
App12 B11	Cash and cash equivalents ~ actual company structure	(100.000)	(100.000)	(100.000)	(100.000)	(100.000)
App12 C15	Borrowings	65.879	52.299	56.427	256.819	349.869
App12 E22	Borrowings	3,755.164	3,936.149	4,091.331	4,016.960	4,054.317
		3,768.020	3,948.773	4,103.347	4,028.261	4,064.810
	Impact of removing PR14 revenue adjustment	1.800	3.692	5.679	7.766	9.955
		8.239	7.943	5.974	7.451	9.733
	<b>Net debt</b>	<b>3,722.843</b>	<b>3,892.140</b>	<b>4,053.437</b>	<b>4,181.545</b>	<b>4,314.141</b>
		<b>3,742.138</b>	<b>3,909.015</b>	<b>4,065.748</b>	<b>4,192.531</b>	<b>4,324.412</b>
	<b>RCF/net debt</b>	<b>6.48%</b>	<b>6.75%</b>	<b>6.80%</b>	<b>7.02%</b>	<b>6.58%</b>
		<b>6.56%</b>	<b>7.06%</b>	<b>7.16%</b>	<b>7.30%</b>	<b>6.84%</b>

**Line 31 – RCF/capex**

*(FFO(post-interest) – dividends paid)/capex*

Calculated as:

	2020-21	2021-22	2022-23	2023-24	2024-25
	£m	£m	£m	£m	£m
App15 C9					
Cash generated from operations	418.345	426.559	446.709	472.002	492.746
	428.253	437.990	458.645	484.164	505.118
Remove PR14 revenue adjustment	(1.773)	(1.808)	(1.844)	(1.882)	(1.919)
	(8.111)	0.545	2.186	(1.271)	(2.017)
<i>Exclude working capital movements:</i>					
App15 B5					
Changes in working capital ~ Inventories, trade and other receivables	(3.530)	1.274	0.145	(1.449)	(1.512)
	(3.529)	1.273	0.146	(1.450)	(1.513)
App15 B6					
Changes in working capital ~ Trade and other payables	(0.657)	(1.751)	(1.381)	(1.182)	(1.588)
	0.220	(1.738)	(1.370)	(1.171)	(1.577)
App15 D10					
Net interest paid	(156.249)	(145.702)	(150.995)	(155.574)	(184.224)
	(156.629)	(146.091)	(151.372)	(155.929)	(184.556)
Dividends paid	(14.700)	(15.800)	(17.000)	(18.100)	(19.300)
Interest impact of removing PR14 revenue adjustment	(0.027)	(0.083)	(0.142)		(0.270)
	(0.125)	(0.246)	(0.212)	(0.205)	(0.263)
<b>RCF</b>	<b>241.409</b>	<b>262.689</b>	<b>275.492</b>	<b>293.610</b>	<b>283.933</b>
	<b>245.379</b>	<b>275.933</b>	<b>291.023</b>	<b>306.038</b>	<b>295.892</b>
<b>Capex</b>	<b>440.083</b>	<b>375.158</b>	<b>386.082</b>	<b>369.341</b>	<b>364.002</b>
	<b>450.768</b>	<b>385.978</b>	<b>397.048</b>	<b>380.440</b>	<b>375.245</b>
<b>RCF/capex</b>	<b>54.86%</b>	<b>70.02%</b>	<b>71.36%</b>	<b>79.50%</b>	<b>78.00%</b>
	<b>54.44%</b>	<b>71.49%</b>	<b>73.30%</b>	<b>80.44%</b>	<b>78.85%</b>

**Line 32 – Return on capital employed**

*(EBIT – tax)/RCV*

In order to generate the 'return' as shown below, EBIT has been calculated by reference to the income statement (App11) and tax is assumed to be the aggregate of UK corporation tax and deferred tax.

The RCV value is as at 31 March in each year.

	2020-21	2021-22	2022-23	2023-24	2024-25
	£m	£m	£m	£m	£m
App11 A6 Operating profit	192.240	207.485	231.886	257.183	283.586
	203.088	219.274	244.288	269.910	296.639
App11 A7 Other income	26.255	26.802	27.360	27.930	28.512
	26.248	26.794	27.352	27.922	28.503
Remove PR14 revenue adjustment	(1.773)	(1.808)	(1.844)	(1.882)	(1.919)
	(8.111)	0.545	2.186	(1.271)	(2.017)
EBIT	<del>216.722</del>	<del>232.479</del>	<del>257.402</del>	<del>283.231</del>	<del>310.179</del>
	221.225	246.613	273.826	296.561	323.125
UK corporation tax	-	-	-	-	-
Deferred tax	-	-	-	-	-
'Return'	<del>216.722</del>	<del>232.479</del>	<del>257.402</del>	<del>283.231</del>	<del>310.179</del>
	221.225	246.613	273.826	296.561	323.125
RCV	<del>6,246.000</del>	<del>6,536.000</del>	<del>6,832.000</del>	<del>7,107.000</del>	<del>7,374.000</del>
	6,251.374	6,543.965	6,842.479	7,119.673	7,387.850
Return on capital employed	<del>3.47%</del>	<del>3.56%</del>	<del>3.77%</del>	<del>3.99%</del>	<del>4.21%</del>
	3.54%	3.77%	4.00%	4.17%	4.37%

**Line 33 – RORE**

*RORE calculates the returns on a regulatory basis by reference to the notional gearing level and average RCV for the year.*

*The base RORE is calculated using the regulatory building blocks and should also reflect the impact of any legacy adjustments to revenue.*

*The base RORE should then be adjusted for the following factors net of any tax impact:*

- 1) The company share of totex out- or underperformance. This should reflect genuine out- or underperformance only. Any totex over- or underspend which is due to timing (i.e. reprofiling of expenditure within the AMP) should not be recognised as out- or underperformance for the purpose of the calculation of RORE.*
- 2) The company share of any out- or underperformance on retail costs.*
- 3) The impact of any ODI or other penalties or rewards earned in the year, even if they are not payable/receivable until the following AMP.*
- 4) The difference between the actual average interest rate charge on borrowings (in real terms) and the allowed interest rate (real) on notional debt. This should be calculated based on the notional capital structure i.e. difference in actual interest rate and allowed interest rate multiplied by notional net debt.*

*Further guidance can be found in the RAGs.*

**The calculation of RoRE has been done on a notional basis and therefore values are the same for the notional and actual company.**

**Line 34 – Target credit rating**

*Please set out what level of credit rating you are targeting, including the name of the relevant credit rating agency.*

Credit rating agencies use a broad range of qualitative and quantitative measures to assess companies' creditworthiness, including company-specific and industry-wide factors. In determining our target credit rating and its achievability, we have looked at the financial credit metrics we have delivered in the past and the associated ratings agency assessments. It is clear from this, and from work carried out by KMPG, that there is a broad range of metrics which warrants a particular credit rating and no company is required to meet all benchmark levels for all metrics. From this, and using stated guidance from the credit rating agencies (where available) we have assessed our forecast credit metrics against these benchmarks and produced a likely credit rating which these metrics would be expected to deliver.

Our credit ratings benefit from at least a one-notch upgrade from the rating which the credit metrics alone might be expected to deliver, as a result of our strict financial covenants and restrictions under our Common Terms Agreement with bondholders and/or from our "not-for-dividend" ownership model. We therefore assume that we need to deliver credit metrics compatible with a BBB+/Baa1/BBB+ (S&P/Moody's/Fitch) underlying credit rating.

Our forecast credit metrics are, overall, consistent with (or exceed) the benchmarks needed for an underlying BBB+/Baa1 rating. We also meet (or outperform) the gearing guidelines for a BBB+/Baa1 for all ratings agencies for all years of AMP7. This, on balance, mitigates some weakness in profitability metrics in some years, as it has in our historic ratings assessments.

**Lines 35 to 44 – Company proposed financial ratios**

*The company's proposed financial ratios.*

**Line 35 – Company proposed financial ratio: cash dividend cover (alternative calculation)**

	2021	2022	2023	2024	2025
	£m	£m	£m	£m	£m
Net cash generated from operating activities	262.096	280.857	295.714	316.428	308.522
	271.624	291.899	307.273	328.235	320.562
	(1.773)	(1.808)	(1.844)	(1.882)	(1.919)
Remove PR14 revenue adjustment	(8.111)	0.545	2.186	(1.271)	(2.017)
	(0.027)	(0.083)	(0.142)		(0.270)
Interest impact of removing PR14 revenue adjustment	(0.125)	(0.246)	(0.212)	(0.205)	(0.263)
Adjusted net cash generated from operating activities	260.296	278.966	293.728	314.341	306.333
	263.388	292.198	309.247	326.759	318.282
Dividends	14.700	15.800	17.000	18.100	19.300
<b>Cash dividend cover</b>	<b>17.71</b>	<b>17.66</b>	<b>17.28</b>	<b>17.37</b>	<b>15.87</b>
	<b>17.92</b>	<b>18.49</b>	<b>18.19</b>	<b>18.05</b>	<b>16.49</b>

**Line 36 – Company proposed financial ratio: gearing (alternative calculation)**

We use a slightly different measure of regulatory gearing from that reported in App10 B23. Our Common Terms Agreement with bondholders incorporates a regulatory gearing ratio which is calculated on an IFRS basis plus the exclusion of deferred issue costs. This results in a slightly higher level of gearing than is reported in App10 B23, as borrowings reported in the company's financial statements prepared under IFRS include accrued interest payable; the difference is illustrated in the reconciliation below.

	2021	2022	2023	2024	2025
	£m	£m	£m	£m	£m
Total borrowings	3,874.668	4,039.182	4,194.023	4,314.923	4,418.016
	3,887.524	4,051.806	4,206.039	4,326.224	4,428.510
	1.800	3.692	5.679	7.766	9.955
Impact of removing PR14 revenue adjustment	8.239	7.943	5.974	7.451	9.733
Cash and cash equivalents	(100.000)	(100.000)	(100.000)	(100.000)	(100.000)
<b>Net debt</b>	<b>3,776.468</b>	<b>3,942.874</b>	<b>4,099.702</b>	<b>4,222.689</b>	<b>4,327.971</b>
	<b>3,795.763</b>	<b>3,959.749</b>	<b>4,112.013</b>	<b>4,233.675</b>	<b>4,338.243</b>
<b>Regulatory capital value</b>	<b>6,246.000</b>	<b>6,536.000</b>	<b>6,832.000</b>	<b>7,107.000</b>	<b>7,374.000</b>
	<b>6,251.374</b>	<b>6,543.965</b>	<b>6,842.479</b>	<b>7,119.673</b>	<b>7,387.850</b>
<b>Gearing (alternative calculation)</b>	<b>60.46%</b>	<b>60.33%</b>	<b>60.01%</b>	<b>59.42%</b>	<b>58.69%</b>
	<b>60.72%</b>	<b>60.51%</b>	<b>60.10%</b>	<b>59.46%</b>	<b>58.72%</b>

## Welsh Water Appointed Business Tables Commentaries

Reconciliation of net debt to App10 B23	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
Net debt per App10 B23 calculation	<del>3,722.843</del> 3,742.138	<del>3,892.140</del> 3,909.015	<del>4,053.437</del> 4,065.748	<del>4,181.545</del> 4,192.531	<del>4,314.141</del> 4,324.412
Remove: deferred issue costs	2.916	2.594	2.272	1.950	1.628
Add: accrued interest payable	50.709	48.140	43.993	39.194	12.202
Net debt per App10 B36 calculation	<del>3,776.468</del> 3,795.763	<del>3,942.874</del> 3,959.749	<del>4,099.702</del> 4,112.013	<del>4,222.689</del> 4,233.675	<del>4,327.971</del> 4,338.243

Note that these ratios are calculated based on appointee-only forecasts. The gearing ratio calculation in our Common Terms Agreement refers to the whole business securitisation, i.e. the group of companies headed by Glas Cymru Anghyfyngedig, the active entities being Dŵr Cymru Cyfyngedig and Dŵr Cymru (Financing) Limited. This also therefore incorporates the non-appointed elements of Dŵr Cymru Cyfyngedig. Including these elements in the ratios would reduce the above measure of gearing by 0.8% to 0.9% over the forecast period.

### Line 37 – Company proposed financial ratio: Moody’s adjusted ICR

Moody’s uses a different measure of adjusted interest cover from the Ofwat ratios specified in Lines 25 and 26, calculated as:

	2020-21 £m	2021-22 £m	2022-23 £m	2023-24 £m	2024-25 £m
Net cash from operations	<del>263.653</del> 274.059	<del>287.138</del> 298.191	<del>302.813</del> 314.385	<del>322.785</del> 334.601	<del>336.602</del> 348.651
Remove PR14 revenue adjustment	<del>(1.773)</del> (8.111)	<del>(1.808)</del> 0.545	<del>(1.844)</del> 2.186	<del>(1.882)</del> (1.271)	<del>(1.919)</del> (2.017)
Interest impact of removing PR14 revenue adjustment	<del>(0.027)</del> (0.125)	<del>(0.083)</del> (0.246)	<del>(0.142)</del> (0.212)	(0.205)	<del>(0.270)</del> (0.263)
Interest received	4.020	4.103	4.193	4.284	4.379
Add back indexation	51.736	52.573	53.305	54.070	55.561
Add back IRE	69.304	71.606	72.215	72.446	71.904
Standardised FFO (1)	<del>386.913</del> 339.147	<del>413.529</del> 374.199	<del>430.540</del> 392.767	<del>451.498</del> 409.855	<del>466.257</del> 422.655
RCV run-off/depreciation	<del>220.052</del> 219.988	<del>231.758</del> 231.839	<del>242.000</del> 242.789	<del>253.206</del> 253.424	<del>263.235</del> 263.505
IRE expensed	69.304	71.606	72.215	72.446	71.904
Excess fast money	-	-	0.022	0.006	0.030
Regulatory capital charges (2)	<del>14.150</del> 303.443	<del>11.935</del> 315.379	<del>11.992</del> 326.996	<del>12.087</del> 337.957	<del>11.916</del> 347.325
Gross interest	<del>209.711</del> 210.091	<del>199.071</del> 199.459	<del>203.607</del> 203.983	<del>208.390</del> 208.746	<del>216.434</del> 216.767
Interest impact of removing PR14 revenue adjustment	<del>0.027</del> 0.125	<del>0.083</del> 0.246	<del>0.142</del> 0.212	0.205	<del>0.270</del> 0.263
Remove indexation	<del>(51.736)</del> (51.736)	<del>(52.573)</del> (52.573)	<del>(53.305)</del> (53.305)	<del>(54.070)</del> (54.070)	<del>(55.561)</del> (55.561)
Adjusted gross interest (3)	<del>158.002</del> 158.480	<del>146.581</del> 147.132	<del>150.444</del> 150.890	<del>154.525</del> 154.881	<del>161.143</del> 161.469
Adjusted FFO (1 - 2 + 3)	<del>255.559</del> 194.185	<del>256.745</del> 205.952	<del>266.748</del> 216.661	<del>280.366</del> 226.779	<del>292.232</del> 236.799

<b>Adjusted interest cover</b>	<del>1.62</del>	<del>1.75</del>	<del>1.77</del>	<del>1.81</del>	<del>1.81</del>
	1.23	1.40	1.44	1.46	1.47

Note that these ratios are calculated based on appointee-only forecasts. Moody's extract the data for their ratings assessment from our published Glas Cymru Holdings Cyfyngedig consolidated group annual report and accounts. These incorporate the non-appointed elements of Dŵr Cymru Cyfyngedig and all other group transactions. Including these elements in the ratios would have little or no impact on the above measures of interest cover (increase of around 0.02 over the period).

**Line 38 – Company proposed financial ratio: S&P FFO/net debt**

S&P uses a different measure of adjusted interest cover from the Ofwat ratios specified in Lines 27 and 28, calculated as:

	2020-21	2021-22	2022-23	2023-24	2024-25
	£m	£m	£m	£m	£m
Revenue	786.148	808.645	832.165	857.128	882.367
	786.258	809.269	833.152	858.204	883.512
	(1.773)	(1.808)	(1.844)	(1.882)	(1.919)
Remove PR14 revenue adjustment	(8.111)	0.545	2.186	(1.271)	(2.017)
	(299.236)	(307.507)	(311.027)	(311.861)	(317.367)
Operational expenditure	(288.560)	(296.689)	(300.066)	(300.765)	(306.130)
IRE	(69.304)	(71.606)	(72.215)	(72.446)	(71.904)
	415.835	427.724	447.079	470.939	491.177
EBITDA	420.283	441.519	463.057	483.722	503.461
	(209.711)	(199.071)	(203.607)	(208.390)	(216.434)
Finance costs	(210.091)	(199.459)	(203.983)	(208.746)	(216.767)
Interest impact of removing PR14 revenue adjustment	(0.027)	(0.083)	(0.142)		(0.270)
	(0.125)	(0.246)	(0.212)	(0.205)	(0.263)
Finance income	4.020	4.103	4.193	4.284	4.379
Current tax	-	-	-	-	-
	210.117	232.674	247.522	266.628	278.852
Adjusted FFO	214.087	245.917	263.054	279.055	290.811
	3,774.668	3,939.182	4,094.023	4,214.923	4,318.016
Net debt (including accrued interest)	3,787.524	3,951.806	4,106.040	4,226.224	4,328.510
	1.800	3.692	5.679	7.766	9.955
Impact of removing PR14 revenue adjustment	8.239	7.943	5.974	7.451	9.733
Less: A6 bond indexation	(53.668)	(58.278)	(63.026)	(67.917)	(72.955)
	76.700	76.700	76.700	76.700	76.700
DB pension liability	75.015	71.565	68.115	64.665	61.215
Unamortised bond issue costs	2.967	2.618	2.269	1.920	1.571
	3,802.467	3,963.914	4,115.645	4,233.392	4,333.288
<b>Adjusted net debt</b>	<b>3,820.077</b>	<b>3,975.653</b>	<b>4,119.371</b>	<b>4,232.343</b>	<b>4,328.075</b>
	5.53%	5.87%	6.01%	6.30%	6.44%
<b>Adjusted FFO/net debt</b>	<b>5.60%</b>	<b>6.19%</b>	<b>6.39%</b>	<b>6.59%</b>	<b>6.72%</b>

Note that these ratios are calculated based on appointee-only forecasts. S&P extract the data for their ratings assessment from our published Glas Cymru Holdings Cyfyngedig consolidated group annual report and accounts. These incorporate the non-appointed elements of Dŵr Cymru Cyfyngedig and all other group transactions. Including these elements in the ratios would slightly improve the above measures of interest cover (increase of around 0.1% to 0.2% over the period).

## App11 - Income statement based on the actual company structure

### Block A – Income statement ~ actual company structure

#### Line 1 – Revenue

*Forecast total appointed business revenue based on the company's actual structure that is within the scope of the price control, together with revenue that is outside of the price control but still forms part of regulated activities.*

Revenue represents all income from appointed activities and is consistent with the disaggregated forecasts reported in other PR19 data tables.

#### Line 2 – Operating expenditure

*Forecast total operating expenditure based on the company's actual structure.*

Operating expenditure represents all operating costs related to appointed activities and is consistent with the disaggregated forecasts reported in other PR19 data tables.

#### Line 3 – Depreciation

*Forecast value of depreciation based on the company's actual structure. This is the negative value of depreciation and amortisation of tangible and intangible assets.*

In the annual performance report, depreciation and amortisation of fixed assets are shown as part of operating costs. This is also the case in our statutory reporting under IFRS, although in disaggregating total operating costs we report amortisation of intangible assets as 'amortisation' rather than 'depreciation'.

Ofwat's guidance states that if, as in our case, we expect intangible assets to amortise over the forecast period, we should include these amounts in the values reported in App16, Tangible fixed assets. We have therefore done so, and the related amortisation/depreciation forms part of the charge reported in this line.

The depreciation charge reported in this line reconciles to App16 as follows:

		2020-21	2021-22	2022-23	2023-24	2024-25
		£m	£m	£m	£m	£m
		<del>1,826.242</del>	<del>2,031.034</del>	<del>2,232.245</del>	<del>2,428.169</del>	<del>2,622.400</del>
App16 D32	Opening accumulated depreciation	1,826.436	2,031.175	2,232.047	2,427.525	2,621.209
		<del>2,031.034</del>	<del>2,232.245</del>	<del>2,428.169</del>	<del>2,622.400</del>	<del>2,810.190</del>
App16 D32	Closing accumulated depreciation	2,031.175	2,232.047	2,427.525	2,621.209	2,808.336
		<del>204.792</del>	<del>201.211</del>	<del>195.924</del>	<del>194.231</del>	<del>187.790</del>
	Charge for the year	204.739	200.872	195.478	193.684	187.127
	Release of deferred income on adopted assets	(5.680)	(5.966)	(6.247)	(6.522)	(6.792)
App12 E27						
		<del>199.113</del>	<del>195.245</del>	<del>189.677</del>	<del>187.708</del>	<del>180.998</del>
App11 A3	<b>Depreciation</b>	<b>199.058</b>	<b>194.907</b>	<b>189.231</b>	<b>187.161</b>	<b>180.336</b>

The release of deferred income on adopted assets is reported as a credit to the depreciation charge (matched against depreciation of the related assets); this treatment is consistent with our statutory reporting under IFRS (IFRIC 18) and with the APR.

#### Line 4 – Amortisation

*Forecast value of amortisation based on the company's actual structure released to the income statement.*

We have included our intangible fixed assets within App16, tangible fixed assets in accordance with Ofwat's guidance as we expect their values to amortise over the forecast period, therefore the amortisation is reported in Line 3 above.

We do not have any other intangible assets, such as goodwill, therefore this line reports a zero value throughout the period.

#### Line 5 – Operating income

*Forecast total historical cost operating income based on the company's actual structure. This includes profits or loss on disposal of fixed assets. Income arising from exceptional items should also be included.*

We have forecast no net profit or loss on disposal of fixed assets, nor any exceptional items, therefore this line reports a zero value throughout the period.

#### Line 6 – Operating profit

*Forecast total historical cost operating profit based on the company's actual structure. This equals the sum of App11 lines 1 to 5.*

The output of this line is calculated using a formula prepopulated in the data table.

#### Line 7 – Other income

*Forecast total other income based on the company's actual structure. This includes rental income and income from investments (e.g. share income) and excludes net interest and profit on disposal of fixed assets.*

Other income is forecast in line with our treatment in the APR and comprises mainly third party and bulk supply income.

#### Line 8 – Interest income

*Forecast total interest income based on the company's actual structure. This includes interest received on cash deposits, loans to group companies etc.*

This line includes forecast interest receivable on cash and cash equivalents plus forecast income from the Elan Valley Trust Fund.

	2020-21	2021-22	2022-23	2023-24	2024-25
		£m	£m	£m	£m
Interest receivable on cash and cash equivalents	1.125	1.125	1.125	1.125	1.125
Elan Valley trust income	2.895	2.978	3.068	3.159	3.254
<b>Interest income</b>	<b>4.020</b>	<b>4.103</b>	<b>4.193</b>	<b>4.284</b>	<b>4.379</b>

## Welsh Water Appointed Business Plan Table Commentaries

The modelling assumes that cash interest is received at 50% of the prevailing 12m LIBOR rate as at 1 April on the opening balance of cash held.

	2020-21	2021-22	2022-23	2023-24	2024-25
Interest receivable on cash deposits	£m	£m	£m	£m	£m
Opening cash	100,000	100,000	100,000	100,000	100,000
Interest receivable	1,125	1,125	1,125	1,125	1,125
<b>APP19 B18</b>	<b>1.13%</b>	<b>1.13%</b>	<b>1.13%</b>	<b>1.13%</b>	<b>1.13%</b>
12-month LIBOR	2.25%	2.25%	2.25%	2.25%	2.25%

As at 31 March 2018 the value of the Elan Valley Trust Fund was £115m and interest income amounted to £2.8m for the year then ended. In forecasting future income we have assumed capital growth in line with RPI and preserved the 2018 return of 2.37%. Further background info is provided in the commentary to App19 Line 19.

	2020-21	2021-22	2022-23	2023-24	2024-25
Elan Valley Trust Fund	£m	£m	£m	£m	£m
Opening market value	122,033	125,671	129,431	133,311	137,313
<b>APP19 B19</b>	<b>2,895</b>	<b>2,978</b>	<b>3,068</b>	<b>3,159</b>	<b>3,254</b>
Return preserved at 2017/18 level	2.37%	2.37%	2.37%	2.37%	2.37%

Line 9 – Interest expense

*Forecast total interest expense based on the company's actual structure. This includes interest paid on loans, leases, debentures, floating rate debt, overdrafts, preference shares and all other borrowings.*

The total interest expense reported in this line includes all relevant items as explicitly noted in the guidance, along with the unwinding of associated transactional costs, the cost of carrying certain loan facilities and other related costs which are appropriately treated as an interest expense under IFRS. A breakdown of the items included is shown below.

	2020-21	2021-22	2022-23	2023-24	2024-25
	£m	£m	£m	£m	£m
Bonds	97.170	75.972	77.259	78.585	79.951
	<del>27.637</del>	<del>37.648</del>	<del>41.279</del>	<del>44.133</del>	<del>49.493</del>
Term loans	28.017	38.037	41.654	44.489	49.825
Finance leases	9.705	9.701	9.168	9.102	9.012
Floating to index-linked swaps	11.381	10.988	10.297	10.088	9.889
Floating to fixed rate swaps	6.566	6.566	6.566	6.566	6.566
Indexation charges	51.736	52.573	53.305	54.070	55.561
Bond wrapping fees	5.243	5.350	5.460	5.573	5.690
Authorised loan facility fees	0.116	0.116	0.116	0.116	0.116
Liquidity facility fees	0.595	0.595	0.595	0.595	0.595
Security Trustee fees	0.030	0.030	0.030	0.030	0.030
Amortisation of bond issue costs	0.322	0.322	0.322	0.322	0.322
Amortisation of bond gilt lock	0.027	0.027	0.027	0.027	0.027
Amortisation of issue premium	(0.765)	(0.765)	(0.765)	(0.765)	(0.765)
Other fees	0.270	0.270	0.270	0.270	0.270
	<b>210.034</b>	<b>199.393</b>	<b>203.930</b>	<b>208.712</b>	<b>216.756</b>
<b>App11 A9 Interest expense</b>	<b>210.413</b>	<b>199.782</b>	<b>204.306</b>	<b>209.068</b>	<b>217.089</b>

Bond wrapping fees reflect the annual cost of a guarantee provided by MBIA in respect of the Class A Bonds. Wrapping fees are calculated at 48 basis points on the principal outstanding (indexed, where appropriate). As at 31 March 2017, MBIA was rated B/B3/- by Moody's, Standard and Poor's and Fitch respectively; the Class A bonds therefore defaulted to their higher underlying ratings of A2/A/A.

Authorised loan facility fees represent the cost of carrying undrawn revolving credit facilities of £100m, calculated at 11 basis points on a principal of £40 million and 12 basis points on a principal of £60 million.

Liquidity facility fees provide an undrawn facility of £170 million at an annual fee of 30 basis points on the principal.

Security Trustee fees of £30,000 per annum are payable under the Common Terms Agreement governing the company's whole business securitisation.

The amortisation of issue costs, gilt lock and premium reflect the unwinding of transactions costs and the net premium on issue of the bonds.

Other fees comprise bank charges and rating agency fees, assumed at £120,000 and £150,000 respectively. Note that bank charges do not include overdraft fees, as the company forecasts carrying positive cash balances throughout the period.

**Line 10 – Interest expense related to the unwinding of discounted liabilities**

*Forecast total other interest expense based on the company's actual structure relating to the unwinding of discounted liabilities.*

This line appears to be designed to report, separately from App11 Line 9, the impact of discounted liabilities being unwound which are not reported within fair value gains and losses, i.e. relating to financial instruments which qualify for hedge accounting. We have no such instruments, and all fair value gains or losses on derivative financial instruments are reported in App11 Line 12.

**Line 11 – Profit before tax and fair value movements**

*Forecast total profit before tax and fair value movements based on the company's actual structure. This equals the sum of App11 lines 6 to 10.*

The output of this line is calculated using a formula prepopulated in the data table.

**Line 12 – Fair value gains/(losses) on derivative financial instruments**

*Forecast total fair values gains/(losses) based on the company's actual structure, arising from financial instruments which must be accounted for at fair value on the balance sheet with changes recognised in the income statement.*

As noted in the commentary to line 10 above, we have no financial instruments which qualify for hedge accounting; however, we have a number of interest rate swaps and have reported all forecast movements in the fair values of these in Line 12. Note that the values reported represent the unwind of the notional values of the swap, as we have not forecast any changes to market conditions after the latest actual reported balance sheet date of 31 March 2018.

**Line 13 – Profit before tax**

*Forecast total historical cost profit based on the company's actual structure on ordinary activities before taxation. Equals the sum of App11 lines 11 and 12.*

The output of this line is calculated using a formula prepopulated in the data table.

**Line 14 – UK corporation tax**

*Forecast total current tax charge on profits from ordinary activities based on the company's actual structure. This will include mainstream corporation tax, income and other taxes. It should exclude any deferred tax charge which is to be reported separately. A positive number for tax credit, negative number for tax charge.*

We do not expect to pay any UK corporation tax during the forecast period, based on our expected levels of income and expenditure. (The notional company model generates a tax charge in the Retail business, however we do not expect this to be realised in the actual appointee company.)

**Line 15 – Deferred tax**

*Forecast total movement in the deferred tax provision based on the company's actual structure. A positive number for tax credit, negative number for tax charge.*

Deferred tax has been forecast at 17% of the profit or loss for each year, in line with the Government's published intention to reduce the rate of mainstream corporation tax to this level from 1 April 2020.

**Line 16 – Profit for the year**

*Forecast total historical cost profit for the year based on the company's actual structure. This is to be shown after taxation, but before deduction of dividends. Equals the sum of App11 lines 13 to 15.*

The output of this line is calculated using a formula prepopulated in the data table.

Block B – Dividends

Line 17 – Dividends

*Forecast total equity dividend paid by the company in the year based on the company's actual structure. This also includes any special dividends paid in the year.*

The forecast dividend values are in line with our dividend policy and expected distributions, as outlined in the commentary to App 18, Share capital and dividends. We expect to pay all dividends in the year of declaration.

Block C – Taxation

Line 18 – Effective tax rate

*Forecast effective tax rate based on the company's actual structure. This is the current tax charge for the appointed business before any adjustments in respect of the prior period, as a % of the profit before taxation for the appointed business. Equals App11 line 14 dividends by line 13.*

The output of this line is calculated using a formula prepopulated in the data table.

## App11a - Income statement based on a notional company structure

### Block A - Income statement ~ notional company structure

#### Line 1 - Revenue

*Forecast total appointed business revenue based on a notional company structure that is within the scope of the price control, together with revenue that is outside of the price control but still forms part of regulated activities.*

Revenue represents all income from appointed activities and is consistent with the disaggregated forecasts reported in other PR19 data tables including App17 when translated in 2017-18 CPIH deflated prices using the indices in App23.

Revenue	2020-21 £m	2021-22 £m	2022-23 £m	2023-24 £m	2024-25 £m
App11a Line 1 Revenue (outturn)	<b>759.893</b>	<b>781.843</b>	<b>804.805</b>	<b>829.198</b>	<b>853.855</b>
R7 Line 19 Residential retail revenue	63.114	63.866	64.395	63.794	64.089
R7 Line 22 Business retail revenue	7.381	7.577	7.718	7.826	7.972
Total Retail Revenue (outturn)	70.495	71.443	72.113	71.620	72.061
App 17 Line 12 Total wholesale water resources revenue requirement	668.464	675.092	682.369	691.400	699.238
Less: App17 line 13 Third party revenue	6.477	6.477	6.477	6.477	6.477
Less: App17 line 18 Total non-price control income (third party services)	17.170	17.190	17.210	17.230	17.250
Less: App17 line 19 Wholesale non-price control income (principal services)	0.877	0.877	0.877	0.877	0.877
Wholesale Revenue (2017-18 CPIH deflated)	643.940	650.548	657.805	666.816	674.634
Total Wholesale Revenue (outturn)	689.398	710.400	732.692	757.578	781.794
Total Revenue	<b>759.893</b>	<b>781.843</b>	<b>804.805</b>	<b>829.198</b>	<b>853.855</b>

Revenue	2020-21 £m	2021-22 £m	2022-23 £m	2023-24 £m	2024-25 £m
App11a Line 1 Revenue (outturn)	<b>760.010</b>	<b>782.474</b>	<b>805.800</b>	<b>830.282</b>	<b>855.009</b>
R7 Line 19 Residential retail revenue	60.737	60.984	61.183	60.221	60.214
R7 Line 22 Business retail revenue	8.311	8.366	8.482	8.591	8.731
Total Retail Revenue (outturn)	<b>69.047</b>	<b>69.350</b>	<b>69.666</b>	<b>68.813</b>	<b>68.945</b>
App 17 Line 12 Total wholesale water resources revenue requirement	669.921	677.580	685.453	694.815	702.916
Less: App17 line 13 Third party revenue	6.477	6.477	6.477	6.477	6.477
Less: App17 line 18 Total non-price control income (third party services)	17.171	17.191	17.210	17.230	17.250
Less: App17 line 19 Wholesale non-price control income (principal services)	0.869	0.869	0.869	0.869	0.869
Wholesale Revenue (2017-18 CPIH deflated)	645.403	653.043	660.896	670.239	678.320
Total Wholesale Revenue (outturn)	<b>690.963</b>	<b>713.124</b>	<b>736.134</b>	<b>761.469</b>	<b>786.064</b>
Total Revenue	<b>760.010</b>	<b>782.474</b>	<b>805.800</b>	<b>830.282</b>	<b>855.009</b>

Line 2 - Operating expenditure

*Forecast total operating expenditure based on a notional company structure.*

Operating expenditure represents all operating costs related to appointed activities and is consistent with the disaggregated forecasts reported in other PR19 data tables. Further detail is provided in respect of wholesale and retail operating expenditure in tables WS1 (Water service), WWS1 (wastewater service), R1 (residential retail) and R4 (business retail).

Line 3 – Depreciation

*Forecast value of depreciation based on a notional company structure. This is the negative value of depreciation of tangible fixed assets.*

Depreciation for the notional company has been calculated using the Ofwat financial model. The simplified calculations in the Ofwat model result in a different depreciation charge to that calculated in practice for the actual company where the charge is calculated on an asset by asset basis. Depreciation in the actual company also includes the release of deferred income on adopted assets, this value is not included in the Ofwat model.

In line with Ofwat’s guidance where we expect intangible assets to amortise over the forecast period, we have included these amounts in the values reported in App16, and therefore in the opening net book values for the purposes of depreciation calculations in the Ofwat model.

Line 4 – Amortisation

*Forecast value of amortisation based on a notional company structure. This is the negative value of amortisation of intangible fixed assets.*

We have included our intangible assets within App16, tangible fixed assets in accordance with Ofwat’s guidance as we expect their value to amortise over the forecast period.

The Ofwat financial model used to prepare the financial statements of the notional company does not separately identify intangible assets, and as such the amortisation is included within line 3 above.

Line 5 - Operating income

*Forecast total historical cost operating income based on a notional company structure. This includes profits or loss on disposal of fixed assets. Income arising from exceptional items should also be included.*

We have forecast no net profit or loss on disposal of fixed assets, nor any exceptional items, therefore this line reports a zero value throughout the period.

Line 6 - Operating profit

*Forecast total historical cost operating profit based on a notional company structure. This equals the sum of App11a lines 1 to 5.*

The output of this line is calculated using a formula prepopulated in the data table.

Line 7 - Other income

*Forecast total other income based on a notional company structure. This includes rental income and income from investments (eg, share income) and excludes net interest and profit on disposals on fixed assets.*

This includes any third party revenue and other non-price control income (third party services). These figures are consistent with the sum of these amounts for each of the price controls as displayed in their revenue projection tables (Wr3, Wn3, WWn5, Bio4).

	2020-21	2021-22	2022-23	2023-24	2024-25
	£m	£m	£m	£m	£m
<b>Other Income</b>					
App11a Line 7 Other Income	26,255	26,802	27,360	27,930	28,512

## Welsh Water Appointed Business Plan Table Commentaries

<del>Wr3 Line 13 + Line 18 + Line 19</del>	<del>19.099</del>	<del>19.119</del>	<del>19.139</del>	<del>19.159</del>	<del>19.179</del>
<del>Wn3 Line 13 + Line 18 + Line 19</del>	<del>4.618</del>	<del>4.618</del>	<del>4.618</del>	<del>4.618</del>	<del>4.618</del>
<del>Wwn5 Line 13 + Line 18 + Line 19</del>	<del>0.631</del>	<del>0.631</del>	<del>0.631</del>	<del>0.631</del>	<del>0.631</del>
<del>Bio4 Line 13 + Line 18 + Line 19</del>	<del>0.176</del>	<del>0.176</del>	<del>0.176</del>	<del>0.176</del>	<del>0.176</del>
<del>Total Other Income</del>					
<del>— 2017-18 FYA (CPIH deflated)</del>	<del>24.524</del>	<del>24.544</del>	<del>24.564</del>	<del>24.584</del>	<del>24.604</del>
<del>— Outturn</del>	<del>26.255</del>	<del>26.802</del>	<del>27.360</del>	<del>27.930</del>	<del>28.512</del>

	2020-21	2021-22	2022-23	2023-24	2024-25
Other Income	£m	£m	£m	£m	£m
App11a Line 7 Other Income	26.248	26.794	27.352	27.922	28.503
Wr3 Line 13 + Line 18 + Line 19	19.100	19.119	19.139	19.159	19.179
Wn3 Line 13 + Line 18 + Line 19	4.617	4.617	4.617	4.617	4.617
Wwn5 Line 13 + Line 18 + Line 19	0.632	0.632	0.632	0.632	0.632
Bio4 Line 13 + Line 18 + Line 19	0.168	0.168	0.168	0.168	0.168
Total Other Income					
2017-18 FYA (CPIH deflated)	24.517	24.537	24.557	24.576	24.596
Outturn	26.248	26.794	27.352	27.922	28.503

### Line 8 - Interest income

*Forecast total interest income based on a notional company structure. This includes interest received on cash deposits, loans to group companies, etc.*

We have used the Ofwat financial model to prepare the financial statements for the notional company. The Ofwat model does not calculate separately interest income from interest expense and as such the line reports a zero values throughout the period.

In the actual company we receive interest receivable on cash and cash equivalents plus income from the Elan Valley Trust Fund. Further background information is provided in the commentary to App19 line 19.

### Line 9 - Interest expense

*Forecast total interest expense based on a notional company structure. This includes interest paid on loans, leases, debenture, floating rate debt, overdrafts, preference shares and all other borrowings.*

We have used the Ofwat financial model to prepare the financial statements for the notional company. The model does not separately identify interest on cash and cash equivalent and as such this line represents net interest expense.

The calculation of interest charges in the Ofwat model is a simplified calculation. The interest calculations for the actual company are calculated on an instrument by instrument basis, reflecting their actual interest rates, tenors and payment terms.

### Line 10 - Interest expense related to the unwinding of discounted liabilities

*Forecast total other interest expense based on a notional company structure relating to the unwinding of discounted liabilities.*

The notional company is assumed not to have and discounted liabilities being unwound and as such this line reports a zero value throughout the period.

### Line 11 - Profit before tax and fair value movements

*Forecast total profit before tax and fair value movements based on a notional company structure. This equals the sum of App11a lines 6 to 10.*

The output of this line is calculated using a formula prepopulated in the data table.

**Line 12 - Fair values gains/(losses) on derivative financial instruments**

*Forecast total fair value gains / (losses) based on a notional company structure, arising on financial instruments which must be accounted for at fair value on the balance sheet with changes recognised in the income statement.*

We have used the Ofwat financial model to populate the financial statement tables for the notional company. The Ofwat model does not model derivative financial instruments and the notional company is assumed not to have derivative financial instruments in its capital structure, therefore this line reports a zero value throughout the period.

**Line 13 - Profit before tax**

*Forecast total historical cost profit based on a notional company structure on ordinary activities before taxation. Equals sum of App11a lines 11 and 12.*

The output of this line is calculated using a formula prepopulated in the data table.

**Line 14 - UK Corporation Tax**

*Forecast total current tax charge on profits from ordinary activities based on a notional company structure. This will include mainstream corporation tax, income and other taxes. It should exclude any deferred tax charge which is to be reported separately. A positive number for tax credit, negative number for tax charge.*

We have used the Ofwat financial model to populate the financial statement data tables for the notional company. The Ofwat model calculates a zero corporation tax charge for the wholesale business but unlike our tax calculations for the actual company the Ofwat model tax a simplistic approach to tax in the retail business and generates a tax charge by multiplying the profit before tax in the retail business by the corporation tax rate.

**Line 15 - Deferred tax**

*Forecast total movement in the deferred tax provision based on a notional company structure. A positive number for tax credit, negative number for tax charge.*

We have used the Ofwat financial model to populate the financial statement tables for the notional company. We have identified two issues with the deferred tax calculation in Ofwat's financial model. These lead to the deferred tax charges in Ofwat's financial model being significantly overstated.

1. Ofwat's model is not recognising a deferred tax asset in respect of tax losses, resulting in the deferred tax charge being overstated by the tax losses not recognised x 17%.
2. Ofwat's tax model calculates a deferred tax asset by comparing pension charges in the P&L (for the defined benefit and defined contribution schemes) with only the amount paid in respect of defined benefit scheme (ignoring deficit recovery payments). This approach ignores the payments to the defined contribution scheme (which will equal the P&L charge), therefore understating the deferred tax charge by the DC contributions x 17%.

Adjusting for these two items results in an effective tax rate of 17% as shown below:

<b>Ofwat tax model</b>	2020-21	2021-22	2022-23	2023-24	2024-25
	£m	£m	£m	£m	£m
Deferred tax charge per Ofwat's tax calculation— wholesale	(29.31)	(26.15)	(23.97)	(21.40)	(18.96)
Deferred tax asset for tax losses not included in Ofwat's tax calculation (note 1)	21.08	19.76	17.82	14.58	11.97

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Pension payments under DC scheme – deferred tax asset overstated (deferred tax charge understated) in Ofwat’s tax calculation (note 2)	(1.55)	(1.55)	(1.56)	(1.58)	(1.60)
<b>Adjusted deferred tax charge</b>	<b>(9.78)</b>	<b>(7.94)</b>	<b>(7.71)</b>	<b>(8.40)</b>	<b>(8.59)</b>
Profit before tax (wholesale)	57.41	46.61	45.26	49.31	50.47
Effective rate based on adjusted charge	<b>17.0%</b>	<b>17.0%</b>	<b>17.0%</b>	<b>17.0%</b>	<b>17.0%</b>
<b>Note 1 – tax losses not recognised by Ofwat’s model</b>					
Tax losses per Ofwat’s model	(124.02)	(116.25)	(104.85)	(85.77)	(70.40)
Deferred tax asset (17%)	21.08	19.76	17.82	14.58	11.97
<b>Note 2 – pension contributions to the DC scheme – excluded in Ofwat’s deferred tax calculation</b>					
DC contributions – nominal prices	9.15	9.10	9.20	9.29	9.41
Deferred tax impact (17%)	1.55	1.55	1.56	1.58	1.60
<b>Ofwat tax model</b>					
	2020-21	2021-22	2022-23	2023-24	2024-25
	£m	£m	£m	£m	£m
Deferred tax charge per Ofwat’s tax calculation – wholesale	(22.588)	(21.048)	(21.257)	(20.290)	(20.454)
Deferred tax asset for tax losses not included in Ofwat’s tax calculation (note 1)	13.949	12.681	10.769	7.565	4.932
Pension payments under DC scheme - deferred tax asset overstated (deferred tax charge understated) in Ofwat’s tax calculation (note 2)	(1.556)	(1.547)	(1.564)	(1.579)	(1.600)
<b>Adjusted deferred tax charge</b>	<b>(11.723)</b>	<b>(11.645)</b>	<b>(13.903)</b>	<b>(16.294)</b>	<b>(19.268)</b>
Profit before tax (wholesale)	68.956	68.501	81.781	95.845	113.343
Effective rate based on adjusted charge	<b>17.0%</b>	<b>17.0%</b>	<b>17.0%</b>	<b>17.0%</b>	<b>17.0%</b>
<b>Note 1 - tax losses not recognised by Ofwat’s model</b>					
Tax losses per Ofwat’s model	82.051	74.597	63.348	44.501	29.009
Deferred tax asset (17%)	13.949	12.681	10.769	7.565	4.932
<b>Note 2 - pension contributions to the DC scheme - excluded in Ofwat’s deferred tax calculation</b>					
DC contributions - nominal prices	9.15	9.10	9.20	9.29	9.41
Deferred tax impact (17%)	1.55	1.55	1.56	1.58	1.60

**Line 16 - Profit for the year**

*Forecast total historical cost profit for the year based on a notional company structure. This is to be shown after taxation, but before deduction of dividends. Equals the sum of App11a lines 13 to 15.*

The output of this line is calculated using a formula prepopulated in the data table.

**Block B - Dividends**

**Line 17 – Dividends**

*Forecast total equity dividend paid by the company in the year based on a notional company structure. This also includes any special dividends paid in the year.*

For our notional company modelling, we have assumed a level of dividends payable to shareholders which is consistent with Ofwat's assumed return on equity – with an opening yield of 2.6% and a real rate of dividend growth of 2.48% over the rate of CPIH inflation.

**Block C – Taxation**

**Line 18 - Effective tax rate**

*Forecast effective tax rate based on a notional company structure. This is the current tax charge for the appointed business before any adjustments in respect of prior period, as a % of the profit before taxation for the appointed business. Equals App11a line 14 divided by line 13.*

The output of this line is calculated using a formula prepopulated in the data table.

## App12 - Balance sheet based on the actual company structure

### Block A – Non-current assets ~ actual company structure

#### Line 1 – Tangible fixed assets

*Forecast total historical cost net book value of tangible fixed assets at the end of the financial year, based on the company's actual structure. Copied from App16 Line 40.*

The output of this line is copied from App16 Line 40 using a formula prepopulated in the data table. Note that in our statutory accounts and in the annual performance report we revalue our tangible fixed assets to the published regulatory capital value as at the balance sheet date. We have not applied that policy prospectively in these forecasts.

#### Line 2 – Intangible assets

*Forecast total value of any intangible assets (not physical in nature) at the end of the financial year, based on the company's actual structure.*

We have included our intangible fixed assets within App16, tangible fixed assets in accordance with Ofwat's guidance as we expect their values to amortise over the forecast period. We do not have any other intangible assets, such as goodwill, therefore this line reports a zero value throughout the period.

Note that this differs from our treatment in the statutory accounts and annual performance report, where intangible assets are shown on a separate line in the balance sheet.

#### Line 3 – Investments ~ loans to group companies

*Forecast total value of loans made to other group companies repayable in more than one year, based on the company's actual structure.*

We do not expect to hold any such investments during the forecast period.

#### Line 4 – Investments ~ other

*Forecast total value of investments, based on the company's actual structure. Forecast total value of investments, based on the company's actual structure.*

We do not expect to hold any such investments during the forecast period.

#### Line 5 – Derivative financial instruments

*Forecast difference between book value and fair value of any non-current assets relating to financial instruments based on the company's actual structure. This includes options, futures, forwards and swaps, which are presented at fair value in the statutory accounts.*

The most recent fair values of our derivative financial instruments are as at 31 March 2018, as published in our statutory accounts and in the annual performance report. Our forecast changes in value represent the unwind of the notional values of the swap, as we have not forecast any changes to market conditions after the latest actual reported balance sheet date of 31 March 2018.

Note that these rows do not report the difference between book value and fair value; they report the forecast book value, subject to the limitations set out above.

#### Line 6 – Retirement benefit assets

*Forecast total amount due to employees in the pension scheme for all of the past service completed up to the balance sheet date (less scheme assets), based on the actual company's structure. If scheme assets exceed liabilities then use this line. Enter zero if the scheme is in deficit.*

We expect our defined benefit pension scheme to remain in deficit throughout the forecast period, therefore this line reports a zero balance. We have entered our forecast scheme liabilities in line 24 and provided further detail in the accompanying commentary.

**Line 7 – Total non-current assets ~ actual company structure**

*Forecast total value of historical cost non-current fixed assets based on the company's actual structure. Equals the sum of App12 lines 1 to 6.*

The output of this line is calculated using a formula prepopulated in the data table.

Note that this line reports the forecast total value of all non-current assets, not just fixed assets, and that these are not all carried at historical cost (as noted in individual line commentaries).

**Block B – Current assets ~ actual company structure**

**Line 8 – Inventories ~ actual company structure**

*Forecast value of stocks held at the year end based on the company's actual structure. Stocks consist of consumable stores and work in progress, including chemicals, stationery, petrol, backfill materials, etc.*

Inventories consist of large volumes of low value consumables, and we do not anticipate any significant fluctuations; as a result the movements in our forecasts allow for inflationary changes only.

**Line 9 – Trade and other receivables**

*Forecast value of all amounts owing to the company at the financial year end based on the company's actual structure. This should include trade debtors, prepayments and accrued income. This includes amounts falling due after more than one year. Any current assets held for sale should also be included here.*

This line has been populated in accordance with the guidance and is equal to the sum of App13 lines 10 and 14 (total Retail and Wholesale trade receivables). Further details on the components of this balance are therefore provided in App13 and the related commentary.

**Line 10 – Derivative financial instruments**

*Forecast difference between book value and fair value of any current assets relating to financial instruments based on the company's actual structure. This includes options, futures, forwards and swaps, which are presented at fair value in the statutory accounts.*

The most recent fair values of our derivative financial instruments are as at 31 March 2018, as published in our statutory accounts and in the annual performance report. Our forecast changes in value represent the unwind of the notional values of the swap, as we have not forecast any changes to market conditions after the latest actual reported balance sheet date of 31 March 2018.

Note that these rows do not report the difference between book value and fair value; they report the forecast book value, subject to the limitations set out above.

**Line 11 – Cash and cash equivalents ~ actual company structure**

*Forecast cash based on the company's actual structure. Cash consists of cash in hand and at bank. Overdraft balances should not be netted off as it should be included separately in 'Trade and other payables'.*

We consider that £100m is a suitable level of cash to carry in order to meet our working capital requirements during the course of the forecast years; our modelling assumes that new borrowings are drawn in order to balance cash to £100m at the balance sheet date.

Note that we have included a notional Residential Retail overdraft balance in this total as required in the guidance to lines 45 to 48 (see further details below).

**Line 12 – Total current assets ~ actual company structure**

*Forecast total value of current fixed assets based on the company's actual structure. Equals the sum of App12 lines 7 to 10.*

The output of this line is calculated using a formula prepopulated in the data table.

NB this line reports the forecast total value of all non-current assets, not just fixed assets.

**Block C – Current liabilities ~ actual company structure**

**Line 13 – Trade and other payables**

*Forecast trade and other payables for current liabilities based on the company's actual structure. This covers trade creditors, accrued interest and any other accruals or creditors due within one year that are not borrowings, tax creditors, capex creditor or liabilities arising from derivative financial instruments.*

This line has been populated in accordance with the guidance and is equal to App14 line 21 (total trade and other payables). Further details on the components of this balance are therefore provided in App14 and the related commentary.

**Line 14 – Capex creditor ~ actual company structure**

*Forecast total capital expenditure creditors due within one year based on the company's actual structure.*

Our forecast level of capital creditors is based on our profiled level of planned capital expenditure, and assumes that creditor days are stable at 30 days throughout the period.

**Line 15 – Borrowings**

*Forecast borrowing balances due within one year based on the company's actual structure. This comprises the following: 1) obligations under finance leases; 2) loans due to other group companies; 3) redeemable debentures; 4) bonds; 5) commercial paper; 6) bills of exchange; 7) bank loans; and 8) any other borrowings. Accrued interest on borrowings should not be included.*

This line has been populated in accordance with the guidelines and contains the following:

	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>
Bonds - nominal value	325.000	-	-	-	-	128.600
Indexation	-	-	-	-	-	131.581
Finance leases	15.086	16.854	0.819	0.915	201.791	33.647
EIB	45.091	40.545	43.000	43.000	40.500	40.500
KfW	2.538	8.064	8.064	12.096	14.112	15.126
Deferred issue costs	(0.322)	(0.322)	(0.322)	(0.322)	(0.322)	(0.322)
Gilt lock	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)
Issue premium	0.765	0.765	0.765	0.765	0.765	0.765
<b>Due within one year</b>	<b>388.131</b>	<b>65.879</b>	<b>52.299</b>	<b>56.427</b>	<b>256.819</b>	<b>349.870</b>

The commentary to App19, Debt and interest costs, provides a reconciliation to borrowings reported in App12 lines 15 and 22.

**Line 16 – Derivative financial instruments**

*Forecast different between book value and fair value of any current liabilities relating to financial instruments based on the company's actual structure. This includes options, futures, forwards and swaps, which are presented at fair value in the statutory accounts.*

The most recent fair values of our derivative financial instruments are as at 31 March 2018, as published in our statutory accounts and in the annual performance report. Our forecast changes in value represent the unwind of the notional values of the swap, as we have not forecast any changes to market conditions after the latest actual reported balance sheet date of 31 March 2018.

Note that these rows do not report the difference between book value and fair value; they report the forecast book value, subject to the limitations set out above.

**Line 17 – Current tax liabilities ~ actual company structure**

*Forecast corporation tax payable based on the company's actual structure. This consists of any balances of corporation tax due to HMRC.*

We do not expect to pay any UK corporation tax during the forecast period, based on our expected levels of income and expenditure. (The notional company model generates a tax charge in the Retail business, however we do not expect this to be realised in the actual appointee company.)

**Line 18 – Provisions**

*Forecast total provisions for liabilities and charges due within one year based on the company's actual structure. This includes deferred income – grants and contributions and all other provisions including restructuring or reorganisation provisions.*

Provisions are mainly for uninsured losses and we do not expect any significant changes over the forecast period, hence the values are the same in each of the years presented.

**Line 19 – Total current liabilities ~ actual company structure**

*Forecast total value of current liabilities to be paid to creditors within one year based on the company's actual structure. Equals the sum of App12 lines 12 to 17.*

The output of this line is calculated using a formula prepopulated in the data table.

**Block D – Net current assets and liabilities ~ actual company structure**

**Line 20 – Net current assets and liabilities ~ actual company structure**

*Forecast total historical cost net current assets and liabilities based on the company's actual structure. Equals the sum of App12 lines 11 and 18.*

The output of this line is calculated using a formula prepopulated in the data table.

**Block E – Non-current liabilities ~ actual company structure**

**Line 21 – Trade and other payables**

*Forecast trade and other payables for non-current liabilities based on the company's actual structure. This covers trade creditors, accrued interest and any other accruals or creditors due after more than one year that are not borrowings, tax creditors, capex creditor or liabilities arising from derivative financial instruments.*

This line has been populated in accordance with the guidance; the vast majority of this balance is made up of accrued interest which drops in 2023/24 and more significantly in 2024/25 on the repayment of finance leases (there are corresponding increases in net interest paid in the cash flow statement - App15, Line 10).

Line 22 – Borrowings

*Forecast borrowing balances due after more than one year based on the company's actual structure. This comprises the following: 1) obligations under finance leases; 2) loans due to other group companies; 3) redeemable debentures; 4) bonds; 5) commercial paper; 6) bills of exchange; 7) bank loans; and 8) any other borrowings. Accrued interest on borrowings should not be included.*

This line has been populated in accordance with the guidelines and contains the following:

	2020 £m	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
Bonds - nominal value	1,613.600	1,613.600	1,613.600	1,613.600	1,613.600	1,485.000
Indexation	577.401	629.137	681.710	735.016	789.086	713.066
Finance leases	395.388	378.534	377.715	376.800	175.009	141.362
EIB	337.295	296.750	253.750	210.750	170.250	129.750
KfW	57.462	49.398	41.334	29.238	15.126	-
	<del>215.194</del>	<del>787.563</del>	<del>968.275</del>	<del>1,126.578</del>	<del>1,254.956</del>	<del>1,586.622</del>
New borrowings	227.231	800.419	980.898	1,138.594	1,266.257	1,597.116
Deferred issue costs	(2.916)	(2.594)	(2.272)	(1.950)	(1.628)	(1.306)
Gilt lock	(51)	(24)	3	30	57	83
Issue premium	3.564	2.799	2.034	1.270	505	(260)
	<del>3,196.937</del>	<del>3,755.164</del>	<del>3,936.149</del>	<del>4,091.331</del>	<del>4,016.960</del>	<del>4,054.317</del>
<b>App12 E22</b>	<b>3,208.975</b>	<b>3,768.020</b>	<b>3,948.773</b>	<b>4,103.347</b>	<b>4,028.261</b>	<b>4,064.810</b>

The commentary to App19, Debt and interest costs, provides a reconciliation to borrowings reported in App12 lines 15 and 22.

Line 23 – Derivative financial instruments

*Forecast difference between book value and fair value of any non-current liabilities relating to financial instruments based on the company's actual structure. This includes options, futures, forwards and swaps, which are presented at fair value in the statutory accounts.*

The most recent fair values of our derivative financial instruments are as at 31 March 2018, as published in our statutory accounts and in the annual performance report. Our forecast changes in value represent the unwind of the notional values of the swap, as we have not forecast any changes to market conditions after the latest actual reported balance sheet date of 31 March 2018.

Note that these rows do not report the difference between book value and fair value; they report the forecast book value, subject to the limitations set out above.

Line 24 – Retirement benefit obligations

*Forecast total amount due to employees in the pension scheme for all of the past service completed up to the balance sheet date (less scheme assets), based on the company's actual structure. Where this calculation results in a net asset it should be shown in this line.*

Note that this does not necessarily reflect amounts due to employees because of the differences in valuation techniques between IAS19 and the actuarial projected unit credit method.

Movements in the liability reflect deficit recovery payments only; we have not forecast changes in the IAS 19 valuation at each balance sheet date. We are committed to making payments of £3.450m in each year of the forecast period, in line with our extant deficit recovery schedule.

Line 25 – Provisions

## Welsh Water Appointed Business Plan Table Commentaries

*Forecast total provisions for liabilities and charges due after one year based on the company's actual structure and not include elsewhere in the table. This includes restructuring or reorganisation provisions.*

Provisions are mainly for uninsured losses and we do not expect any significant changes over the forecast period, hence the values are the same in each of the years presented.

### Line 26 – Deferred income ~ GandCs

*Forecast total balance of deferred income relating to capitalised grants and contributions received.*

We have netted grants and contributions off the related asset balances in App16, Tangible fixed assets and consequently in App12, Line 1 (Tangible fixed assets). This treatment is consistent with our statutory accounts and the annual performance report.

Forecast grant and contributions are visible in the commentary to App16, lines 9 to 16 and in the individual business unit expenditure tables.

### Line 27 – Deferred income ~ adopted assets

*Forecast total balance of deferred income relating to adopted assets.*

We have included an estimate of the value of assets adopted in each of the forecast years (assuming a plateau at £20m per annum after recent years' mass adoptions of private sewers and pumping stations), along with a related release of deferred income over the assets' lives. The deferred income release is reported as a credit to the depreciation charge (matched against depreciation of the related assets); this treatment is consistent with our statutory reporting under IFRS (IFRIC 18) and with the APR.

	2020 £m	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
Opening balance	264.283	283.997	298.317	312.351	326.104	339.582
Additions	25.000	20.000	20.000	20.000	20.000	20.000
Amortisation	(5.286)	(5.680)	(5.966)	(6.247)	(6.522)	(6.792)
<b>Deferred income ~ adopted assets</b>	<b>283.997</b>	<b>298.317</b>	<b>312.351</b>	<b>326.104</b>	<b>339.582</b>	<b>352.790</b>

### Line 28 – Preference share capital

*Forecast nominal value of the preference share capital.*

We do not have or intend to issue any preference shares during the period to 2025, hence we have reported a zero balance in this cell.

### Line 29 – Total non-current liabilities ~ actual company structure

*Forecast total value of non-current liabilities due to creditors after one year based on the company's actual structure. Equals the sum of App12 lines 21 to 28.*

The output of this line is calculated using a formula prepopulated in the data table.

### Block F – Net assets before deferred tax ~ actual company structure

#### Line 30 – Net assets before deferred tax ~ actual company structure

*Forecast total assets employed by the business under the historical cost accounting convention before deferred tax and based on the company's actual structure. Equals the sum of App12 lines 7, 12, 19 and 29.*

The output of this line is calculated using a formula prepopulated in the data table.

Block G – Deferred tax ~ actual company structure

Line 31 – Deferred tax ~ actual company structure

*Forecast provision for tax liabilities arising from timing differences between the recognition of gains and losses in the financial statements and their recognition in a tax computation, based on the company's actual structure. A deferred tax asset should be entered as a positive number.*

Deferred tax movements are based on applying a rate of 17% to the profit or loss for each year, in line with the Government's published intention to reduce the rate of mainstream corporation tax to this level from 1 April 2020.

Block H – Net assets ~ actual company structure

Line 32 – Net assets ~ actual company structure

*Forecast total assets employed by the business under the historical cost accounting convention before deferred tax and based on the company's actual structure. Equals the sum of App12 lines 6, 11, 18 and 25.*

The output of this line is calculated using a formula prepopulated in the data table.

Block I – Equity ~ actual company structure

Line 33 – Called up share capital (including any share premium)

*Forecast nominal value of the ordinary equity shares of the company based on the company's actual structure and which are issued and fully paid. Copied from App18 Line 6.*

The output of this line is copied from App18 Line 6 using a formula prepopulated in the data table.

Line 34 – Retained profits

*Forecast cumulative balance of historical cost profits retained based on the company's actual structure. Copied from App12 line 40.*

The output of this line is calculated using a formula prepopulated in the data table.

Line 35 – Other reserves

*Forecast cumulative balance of any other reserves based on the company's actual structure, other than called up share capital.*

Other reserves represent the opening balance on our revaluation reserve; there are no movements during the forecast period as we have not modelled any revaluations (see commentary to line 1, Tangible fixed assets).

Line 36 – Total equity ~ actual company structure

*Forecast total value of shareholders' funds based on the company's actual structure. This is the sum of called up share capital, share premium, profit and loss account and other reserves. Equals the sum of App12 lines 29, 30 and 31.*

The output of this line is calculated using a formula prepopulated in the data table.

Line 37 – Retained profits ~ wholesale

Line 38 – Retained profits ~ residential retail

Line 39 – Retained profits ~ business retail

*Forecast cumulative balance of historical cost profits retained based on the company's actual structure for wholesale, residential retail and business retail.*

The retained profits for Residential Retail and Business Retail have been derived to balance the opening Residential Retail and Business Retail balance sheets. This is an artificial construct in order to balance the balance sheet in the financial model. In practice these balance sheets do not balance as, on 1 April 2015, those business units gained assets comprising fixed assets, debtors and accrued income but there is no corresponding liability to reflect this.

The Wholesale balance is the residual level of retained profit after removing the Retail balances.

Line 40 – Retained profits

*Forecast cumulative balance of historical cost profits retained based on the company's actual structure. Sum of App12 lines 37 to 39.*

The output of this line is calculated using a formula prepopulated in the data table.

Line 41 – Capex creditor ~ wholesale

Line 42 – Capex creditor ~ residential retail

Line 43 – Capex creditor ~ business retail

*Forecast total capital expenditure creditors due within one year based on the company's actual structure for wholesale, residential retail and business retail.*

The total capex creditor has been allocated to Wholesale, Residential Retail and Business Retail at each balance sheet date in proportion to the respective investment levels during the year as reported in App16 block B, fixed asset additions in the year.

Line 44 – Capex creditor

*Forecast total capital expenditure creditors due within one year based on the company's actual structure. Sum of App12 lines 41 to 43.*

The output of this line is calculated using a formula prepopulated in the data table.

Line 45 – Cash and cash equivalents ~ wholesale

Line 46 – Cash and cash equivalents ~ residential retail

Line 47 – Cash and cash equivalents ~ business retail

*Forecast cash based on the company's actual structure for wholesale, residential retail and business retail. Cash consists of cash in hand and at bank. Overdraft balances should be included as a negative figure.*

Cash balances for Residential Retail and Business Retail have been derived from historical data published in the annual performance report and forecast performance to 2025. The Wholesale balance is the residual level of cash after removing the Retail balances. In practice the company does not hold separate cash balances for the wholesale, residential retail and business retail units.

Line 48 – Cash and cash equivalents

*Forecast cash based on the company's actual structure. Cash consists of cash in hand and at bank. Overdraft balances should be included as a negative figure. Sum of App12 lines 45 to 47.*

The output of this line is calculated using a formula prepopulated in the data table.

## App12a - Balance sheet based on a notional company structure

### Table overview

The input cells on this table have been populated using the Ofwat financial model. The values shown in other lines are calculated in the table or copied from other tables using a formula pre-populated in the data table.

The balance sheet presented here does not balance due to line 1 (a line completed by a formula prepopulated in the data tables), being populated from the net assets in App16, which is based on our actual company modelling. The other lines are calculated in the Ofwat financial model, where the balancing entry is made in retained profits – wholesale.

### Block A - Non-current assets

#### Line 1 Tangible fixed assets

*Forecast total historical cost net book value of tangible fixed assets at the end of the financial year, based on a notional company structure.*

The output of this line is taken from App16 Line 40. This is not the same as net book value of tangible fixed assets as calculated by the Ofwat financial model. The depreciation calculations in our actual company modelling differ from the simplified calculations in the Ofwat modelling.

As this line is populated from App16 which is based on the actual company modelling and all others are taken from the Ofwat financial model, the Balance Sheet Presented in this table does not balance.

#### Line 2 - Intangible assets

*Forecast total value of any intangible assets (not physical in nature) at the end of the financial year, based on a notional company structure.*

We have included our intangible fixed assets within App16, tangible fixed assets in accordance with Ofwat's guidance as we expect their values to amortise over the forecast period. We do not have any other intangible assets, such as goodwill, therefore this line reports a zero value throughout the period.

#### Line 3 - Investments ~ loans to group companies

*Forecast total value of loans made to other group companies repayable in more than one year, based on a notional company structure.*

We do not expect to hold any such investments during the forecast period.

#### Line 4 - Investments ~ other

*Forecast total value of investments, based on a notional company structure.*

We do not expect to hold any such investments during the forecast period.

#### Line 5 - Derivative financial instruments

*Not applicable.*

#### Line 6 - Retirement benefit assets

*Forecast total amount due to employees in the pension scheme for all of the past service completed up to the balance sheet date (less scheme assets), based on the actual company's structure. If scheme assets exceed liabilities then use this line. Enter zero if the scheme is in deficit.*

We expect that the defined benefit pension scheme in the notional company will remain in deficit throughout the forecast period. For this reason, this line shows a zero balance. We have entered our forecast scheme liabilities in line 24 within this table and provide further detail in the associated commentary.

**Line 7 - Total**

*Forecast total value of historical cost non-current fixed assets based on a notional company structure.*

The output of this line is calculated using a formula prepopulated in the data table.

**Block B - Current Assets**

**Line 8 - Inventories**

*Forecast value of stocks held at the year end based on a notional company structure. Stocks consist of consumable stores and work in progress, including chemicals, stationery, petrol, backfill materials, etc.*

Inventories consist of large volumes of low value consumables and we do not anticipate any significant fluctuations in inventories for the notional company. As a result, the movements in our forecast allow for inflationary changes only.

**Line 9 - Trade and other receivables**

*Forecast value of all amounts owing to the company at the financial year end based on a notional company structure. This should include trade debtors, prepayments and accrued income. This includes amounts falling due after more than one year. Any current assets held for sale should also be included here.*

The output of this line has been populated using the Ofwat financial model. This includes debtor balance and measured income accrual balance for retail and the trade debtors and other receivables balance for each price control within wholesale.

**Line 10 - Derivative financial instruments**

*Not applicable.*

**Line 11 - Cash and cash equivalents**

*Forecast cash based on a notional company structure. Cash consists of cash in hand and at bank. Overdraft balances should not be netted off as it should be included separately in 'Trade & other payables'.*

The output of this line is calculated using a formula prepopulated in the data table.

**Line 12 - Total**

*Forecast total value of current fixed assets based on a notional company structure.*

The output of this line is calculated using a formula prepopulated in the data table.

**Block C - Current Liabilities**

**Line 13 - Trade and other payables**

*Forecast trade and other payables for current liabilities based on a notional company structure. This covers trade creditors, accrued interest and any other accruals or creditors due within one year that are not borrowings, tax creditors, capex creditor or liabilities arising from derivative financial instruments.*

The output of this line has been populated using the Ofwat financial model. The financial model does not separately model current and non-current trade and other payables and as such this line represents both. This represents the balance of trade and other payables due within one year at 31 March in each year from 2020 to 2025 inclusive. This includes advance receipts and creditor balances for retail and trade creditors and other payables balance for wholesale.

**Line 14 - Capex creditor**

*Forecast total capital expenditure creditors due within one year based on a notional company structure.*

The output of this line is calculated using a formula prepopulated in the data table.

**Line 15 - Borrowings**

*Forecast borrowing balances due within one year based on a notional company structure. This comprises the following: 1) obligations under finance leases; 2) loans due to other group companies; 3) redeemable debentures; 4) bonds; 5) commercial paper; 6) bills of exchange; 7) bank loans; and 8) any other borrowings. Accrued interest on borrowings should not be included.*

The Ofwat financial model does not separately model current and non-current borrowings and as such this line shows a nil value in each period with borrowings represented in line 22.

**Line 16 - Derivative financial instruments**

*Not applicable.*

**Line 17 - Current tax liabilities**

*Forecast corporation tax payable based on a notional company structure. This consists of any balances of corporation tax due to HMRC.*

The Ofwat financial model calculates a tax charge for the Retail business in the notional company (as shown in App11a) but it is assumed that this will be paid in the year it is incurred. Therefore, this line reports a zero balance for tax liabilities on the balance sheet.

**Line 18 - Provisions**

*Forecast total provisions for liabilities and charges due within one year based on a notional company structure. This includes deferred income – grants and contributions and all other provisions including restructuring or reorganisation provisions.*

The Ofwat financial model does not separately model current and non-current provisions and as such this line shows a nil value in each period with total provisions represented in line 25.

**Line 19 - Total**

*Forecast total value of current liabilities to be paid to creditors within one year based on a notional company structure.*

The output of this line is calculated using a formula prepopulated in the data table.

**Block D - Net Current Assets and Liabilities**

**Line 20 Net current assets and liabilities**

*Forecast total historical cost net current assets and liabilities based on a notional company structure.*

The output of this line is calculated using a formula prepopulated in the data table.

**Block E - Non-current liabilities**

**Line 21 Trade and other payables**

*Forecast trade and other payables for non-current liabilities based on a notional company structure. This covers trade creditors, accrued interest and any other accruals or creditors due after more than one year that are not borrowings, tax creditors, capex creditor or liabilities arising from derivative financial instruments.*

The Ofwat financial model does not separately model current and non-current trade and other payables and as such this line shows a nil value in each period with total trade and other payables represented in line 13.

**Line 22 Borrowings**

*Forecast borrowing balances due after more than one year based on a notional company structure. This comprises the following: 1) obligations under finance leases; 2) loans due to other group companies; 3) redeemable debentures; 4) bonds; 5) commercial paper; 6) bills of exchange; 7) bank loans; and 8) any other borrowings. Accrued interest on borrowings should not be included.*

This line has been populated using the Ofwat financial model. The borrowing balance is calculated as the sum of the fixed rate debt balance, change in net debt balances used to notionalise the company

capital structure, index linked debt balance and floating rate debt balance across all price controls. The model does not raise new borrowing in the period and therefore the cash and cash equivalent line also represents borrowings for the period.

**Line 23 Derivative financial instruments**

*Not applicable.*

**Line 24 Retirement benefit obligations**

*Forecast total amount due to employees in the pension scheme for all of the past service completed up to the balance sheet date (less scheme assets), based on a notional company structure. Enter zero if the scheme is in surplus.*

The values in this line are populated from the Ofwat financial model. The values differ from those contained in the actual company balance sheet as the pension modelling in the Ofwat model does not take into account the pension deficit repair contributions that the retail businesses make. The deficit repair contributions not included in the Ofwat pension modelling are £0.346m per annum (total of R1 line 7 and R4 line 5 for each year). The movements in the liability reflect deficit recovery payments for wholesale only in this table. The movements in App12 reflect the retail and wholesale deficit recovery payments.

**Line 25 Provisions**

*Forecast total provisions for liabilities and charges due after one year based on a notional company structure and not included elsewhere in the table. This includes restructuring or reorganisation provisions.*

The Ofwat financial model does not separately model current and non-current provisions and as such this represents total provisions.

Provisions are mainly for uninsured losses and we do not expect any significant changes over the forecast period, hence the values are the same in each of the years presented.

**Line 26 Deferred income ~ G&Cs**

*Forecast total balance of deferred income relating to capitalised grants and contributions received.*

For the notional company, we grants and contributions are netted off the related asset balances in App16 (Tangible Fixed Assets) and consequently in App12a Line 1 (Tangible Fixed Assets).

**Line 27 Deferred income ~ adopted assets**

*Forecast total balance of deferred income relating to adopted assets.*

The Ofwat financial model does not accommodate deferred income on adopted assets. So unlike the actual company this line is nil throughout the period for the notional company.

**Line 28 Preference share capital**

*Forecast nominal value of the preference share capital.*

It is assumed that the notional company will not have or intend to issue any preference shares during the period 2020-2025. Therefore, there is a zero balance reported in this line for the forecast period of AMP7.

**Line 29 Total**

*Forecast total value of non-current liabilities due to creditors after one year based on a notional company structure.*

The output of this line is calculated using a formula prepopulated in the data table.

**Block F - Net Assets Before Deferred Tax**

**Line 30 Net assets before deferred tax**

*Forecast total assets employed by the business under the historical cost accounting convention before deferred tax and based on a notional company structure.*

The output of this line is calculated using a formula prepopulated in the data table.

**Block G - Deferred Tax**

**Line 31 Deferred tax**

*Forecast provision for tax liabilities arising from timing differences between the recognition of gains and losses in the financial statements and their recognition in a tax computation, based on a notional company structure. A deferred tax asset should be entered as a positive number.*

We have used the Ofwat financial model to populate this line. We have identified issues with the deferred tax calculation in the Ofwat financial model which overstate the deferred tax charge in each period. The line commentary to line 15 in App11a has further details. The movements in the closing balance between each year correspond to the deferred tax value shown in App11a line 15.

**Block H - Net Assets**

**Line 32 Net Assets**

*Forecast total assets employed by the business under the historical cost accounting convention after deferred tax and based on a notional company structure.*

The output of this line is calculated using a formula prepopulated in the data table.

**Block I – Equity**

**Line 33 Called-up share capital (including any share premium)**

*Forecast nominal value of the ordinary shares of the company based on a notional company structure and which are issued and fully paid.*

The output of this line is calculated using a formula prepopulated in the data table.

**Line 34 Retained profits**

*Forecast cumulative balance of historical cost profits retained based on a notional company structure.*

The output of this line is calculated using a formula prepopulated in the data table.

**Line 35 Other reserves**

*Forecast cumulative balance of any other reserves based on a notional company structure, other than called up share capital.*

Other reserves represent the opening balance on our revaluation reserve. There are no movements during the forecast period as we have not modelled any revaluations.

**Line 36 Total equity**

*Forecast total value of shareholders' funds based on a notional company structure. This is the sum of called up share capital, share premium, profit and loss account and other reserves.*

The output of this line is calculated using a formula prepopulated in the data table.

**Block J - Wholesale and Retail Line Item Split**

**Line 37 Retained profits – wholesale**

**Line 38 Retained profits- residential retail**

**Line 39 Retained profits - business retail**

*Forecast cumulative balance of historical cost profits retained based on a notional company structure for wholesale, residential retail and business retail.*

We have used the Ofwat financial model to populate these lines. The retained profits for Residential Retail and Business Retail have been derived to balance the opening Residential Retail and Business Retail balance sheets. This is an artificial construct in order to balance the balance sheet in the financial model. In practice these balance sheets do not balance as, on 1 April 2015, those business units gained assets comprising fixed assets, debtors and accrued income but there is no corresponding liability to reflect this. The Wholesale balance in 2020 is the residual level of retained profit calculated in the Ofwat financial model after removing the Retail balances.

**Line 40 Retained profits**

*Forecast cumulative balance of historical cost profits retained based on a notional company structure.*

The output of this line is calculated using a formula prepopulated in the data table.

**Line 41 Capex creditor – wholesale**

**Line 42 Capex creditor - residential retail**

**Line 43 Capex creditor - business retail**

*Forecast total capital expenditure creditors due within one year based on a notional company structure for wholesale, residential retail and business retail.*

We have used the Ofwat financial model to populate these lines.

**Line 44 Capex creditor**

*Forecast total capital expenditure creditors due within one year based on a notional company structure.*

The output of this line is calculated using a formula prepopulated in the data table.

**Line 45 Cash and cash equivalents – wholesale**

**Line 46 Cash and cash equivalents - residential retail**

**Line 47 Cash and cash equivalents - business retail**

*Forecast cash based on a notional company structure for wholesale, residential retail and business retail. Cash consists of cash in hand and at bank. Overdraft balances should be included as a negative figure.*

Opening cash balances for Residential Retail and Business Retail have been derived from historical data published in the annual performance report and forecast performance to 2025. The Wholesale balance is the residual level of cash after removing the Retail balances. In practice the company does not hold separate cash balances for the wholesale, residential retail and business retail units. For the 2020-21 to 2024-25 the cash and cash equivalent balances for the notional company are calculated in the Ofwat financial model. The model does not assume any additional borrowing during the period and therefore creates the overdraft position represented here.

**Line 48 Cash and cash equivalents**

*Forecast cash based on a notional company structure. Cash consists of cash in hand and at bank. Overdraft balances should be included as a negative figure.*

The output of this line is calculated using a formula prepopulated in the data table.

## App13 - Trade receivables

### Block A – Retail

#### Line 1 – Residential retail unmeasured trade receivables ~ net

*Forecast value of amounts owing to the company at the financial year end, in relation to unmeasured residential retail trade receivables and based on the company's actual structure. This should include trade debtors. This also includes amounts falling due after more than one year. Any current assets held for sale should also be included here.*

Line 1 has been populated using historical balance sheet data adjusted on an annual basis in line with the forecast bad debt modelling, i.e. debtor movements are consistent with achieving the reductions in the bad debt charge included in operating expenditure.

The ratio of measured to unmeasured debt for both Residential Retail and Business Retail has been adjusted annually based on the forecast property numbers in Table WS3.

#### Line 2 – Residential retail measured trade receivables ~ net

*Forecast value of amounts owing to the company at the financial year end, in relation to measured residential retail trade receivables and based on the company's actual structure. This should include trade debtors. This also includes amounts falling due after more than one year. Any current assets held for sale should also be included here.*

Line 2 has been populated using historical balance sheet data adjusted on an annual basis in line with the forecast bad debt modelling, i.e. debtor movements are consistent with achieving the reductions in the bad debt charge included in operating expenditure.

The ratio of measured to unmeasured debt for both Residential Retail and Business Retail has been adjusted annually based on the forecast property numbers in Table WS3.

#### Line 3 – Business customers / business retail unmeasured trade receivables ~ net

*Forecast value of amounts owing to the company at the financial year end, in relation to unmeasured business customers / business retail trade receivables and based on the company's actual structure. This should include trade debtors. This also includes amounts falling due after more than one year. Any current assets held for sale should also be included here.*

Lines 3 and 4 have been populated using historical balance sheet data (2.59% of Business Retail trade receivables allocated to unmeasured) adjusted on an annual basis in line with the forecast bad debt modelling, i.e. debtor movements are consistent with achieving the reductions in the bad debt charge included in operating expenditure.

The ratio of measured to unmeasured debt for both Residential Retail and Business Retail has been adjusted annually based on the forecast property numbers in Table WS3.

#### Line 4 – Business customers / business retail measured trade receivables ~ net

*Forecast value of amounts owing to the company at the financial year end, in relation to measured business customers / business retail trade receivables and based on the company's actual structure. This should include trade debtors. This also includes amounts falling due after more than one year. Any current assets held for sale should also be included here.*

Lines 3 and 4 have been populated using historical balance sheet data (97.41% of Business Retail trade receivables allocated to measured) adjusted on an annual basis in line with the forecast bad debt modelling, i.e. debtor movements are consistent with achieving the reductions in the bad debt charge included in operating expenditure.

The ratio of measured to unmeasured debt for both Residential Retail and Business Retail has been adjusted annually based on the forecast property numbers in Table WS3.

**Line 5 – Retail other trade receivables ~ net**

*Forecast value of amounts owing to the company at the financial year end, in relation to other trade receivables not included in lines 1 to 4 above and based on the company's actual structure. This should include trade debtors. This also includes amounts falling due after more than one year. Any current assets held for sale should also be included here.*

Line 5 has been populated using historical balance sheet data adjusted on an annual basis in line with the forecast bad debt modelling, i.e. debtor movements are consistent with achieving the reductions in the bad debt charge included in operating expenditure.

**Line 6 – Residential retail measured income accrual**

*Forecast value of amounts owing to the company at the financial year end, in relation to accrued income from measured residential retail trade receivables and based on the company's actual structure. This also includes amounts falling due after more than one year.*

Line 6 has been populated using historical balance sheet data adjusted on an annual basis in line with the forecast bad debt modelling, i.e. debtor movements are consistent with achieving the reductions in the bad debt charge included in operating expenditure.

**Line 7 – Business customers / business retail measured income accrual**

*Forecast value of amounts owing to the company at the financial year end, in relation to accrued income from measured business customers / business retail trade receivables and based on the company's actual structure. This also includes amounts falling due after more than one year.*

Line 7 has been populated using historical balance sheet data adjusted on an annual basis in line with the forecast bad debt modelling, i.e. debtor movements are consistent with achieving the reductions in the bad debt charge included in operating expenditure.

**Line 8 – Prepayments and accrued income ~ retail**

*Forecast value of amounts owing to the company at the financial year end, in relation to other retail prepayments and accrued income from trade receivables and based on the company's actual structure. This also includes amounts falling due after more than one year.*

We have reported a zero value here as we have not modelled any discreet prepayments and accrued income in the Retail model; they are deemed to form part of the cash overdraft provided by the Wholesale business (see commentary to App12, lines 45 to 48).

**Line 9 – Corporation tax ~ retail**

*Forecast value of any amounts owing to the company at the financial year end, in relation to retail corporation tax rebates and based on the company's actual structure.*

We do not expect to pay any UK corporation tax during the forecast period, based on our expected levels of income and expenditure. (The notional company model generates a tax charge in the Retail business, however we do not expect this to be realised in the actual appointee company.)

**Line 10 – Total retail trade receivables**

*Forecast total value of all amounts owing to the company at the financial year end in relation to retail trade receivables and based on the company's actual structure. Equals the sum of App13 lines 1 to 9.*

The output of this line is calculated using a formula prepopulated in the data table.

**Block B – Wholesale**

**Line 11 – Trade and other receivables ~ net**

*Forecast value of amounts owing to the company at the financial year end, in relation to wholesale trade receivables and based on the company's actual structure. This should include trade debtors.*

*This also includes amounts falling due after more than one year. Any current assets held for sale should also be included here.*

Line 11 reports the residual appointee trade and other receivables which do not form part of the Retail business.

**Line 12 – Prepayments and accrued income ~ wholesale**

*Forecast value of amounts owing to the company at the financial year end, in relation to other prepayments and accrued income from wholesale trade receivables and based on the company's actual structure. This also includes amounts falling due after more than one year.*

Line 12 reports the appointee prepayments and accrued income which do not form part of the Retail business.

**Line 13 – Wholesale ~ corporation tax**

*Forecast value of any amounts owing to the company at the financial year end, in relation to wholesale corporation tax rebates and based on the company's actual capital structure.*

We do not expect to pay any UK corporation tax during the forecast period, based on our expected levels of income and expenditure.

**Line 14 – Total wholesale trade receivables**

*Forecast total value of all amounts owing to the company at the financial year end in relation to wholesale trade receivables and based on the company's actual structure. Equals the sum of App13 lines 11 to 13.*

The output of this line is calculated using a formula prepopulated in the data table.

## App14 - Trade and other payables

### Block A – Trade and other payables

#### Line 1 – Wholesale trade payables

*Forecast wholesale trade payables for current liabilities based on the company's actual structure. This covers trade creditors associated with opex due within one year.*

#### Line 2 – Wholesale other payables

*Forecast wholesale other payables for current liabilities based on the company's actual structure. This covers accrued interest and any other accruals or creditors due within one year that are not trade creditors, borrowings, tax creditors, capex creditor or liabilities arising from derivative financial instruments.*

#### Line 3 – Retail trade and other payables

*Forecast total retail trade and other payables for current liabilities based on the company's actual structure. This covers trade creditors, accrued interest and any other accruals or creditors due within one year that are not borrowings, tax creditors, capex creditor or liabilities arising from derivative financial instruments. Equals sum of App14 lines 4 to 9.*

#### Line 4 – Wholesale creditors ~ residential retail

*Forecast current trade payables for wholesale charges to residential retail.*

#### Line 5 – Wholesale creditors ~ business retail

*Forecast current trade payables for wholesale charges to business retail.*

Lines 1 to 5 have been populated using the most recent historical balance sheet data available, as reported in the annual performance report as at 31 March 2018. Balances have then been adjusted on an annual basis in line with our target payment terms of 30 days. (Line 2 is the sum of Lines 4 to 11).

#### Line 6 – Retail trade payables

*Forecast trade payables for retail trade based on the company's actual structure.*

#### Line 7 – Retail other payables

*Forecast retail other payables based on the company's actual structure.*

We have reported zero balance in all of the forecast years for Lines 6 and 7 as they form part of the Wholesale trade and other payables balances; any balances would be small and fall within the working capital provided by way of the notional cash/overdraft balance in App12, Lines 46 and 47 (see also the commentary to these lines regarding the components of the Retail balance sheets).

#### Line 8 - Residential retail unmeasured advance receipts

*Forecast unmeasured residential retail advance receipts for current liabilities based on the company's actual structure.*

#### Line 9 - Residential retail measured advance receipts

*Forecast measured residential retail advance receipts for current liabilities based on the company's actual structure.*

#### Line 10 - Business customers / business retail unmeasured advance receipts

*Forecast unmeasured business customers / business retail advance receipts for current liabilities based on the company's actual structure.*

Line 11 - Business customers / business retail measured advance receipts

*Forecast measured business customers / business retail advance receipts for current liabilities based on the company's actual structure.*

Lines 8 to 11 have been populated using the most recent historical balance sheet data available, as reported in the annual performance report as at 31 March 2018. Balances have then been adjusted on an annual basis in line with our target payment terms of 30 days.

**Line 12 – Retail tax creditors**

*Forecast measured retail tax creditors for current liabilities based on the company's actual structure*

We do not expect to pay any UK corporation tax during the forecast period, based on our expected levels of income and expenditure. (The notional company model generates a tax charge in the Retail business, however we do not expect this to be realised in the actual appointee company.)

Line 13 - Preference shares

*Forecast value of preference shares based on the company's actual structure. Preference shares are shares on which a set rate of dividend is paid. The holders of preference shares are entitled to their dividend before ordinary shareholders and rank above ordinary shareholders should the company be wound up. Copied from App18 line 15, multiplied by -1.*

The output of Line 13 is calculated using a formula prepopulated in the data table and links to App18, Share capital and dividends.

We do not currently have any preference share capital in issue, and we do not anticipate issuing any during the forecast period, therefore this line reports a zero value in all years.

Line 14 - Dividend creditors

*Forecast value of dividends due to creditors at the year end based on the company's actual capital structure. Copied from App14 line 28.*

The output of this line is calculated using a formula prepopulated in the data table.

Note that all dividends are expected to be paid during the year in which they are declared, hence this line reports a zero for all of the forecast years. For further detailed on dividends, please see App18, Share capital and dividends, and its associated commentary.

Line 15 - Total trade and other payables

*Forecast total value of trade and other payables for current liabilities based on the company's actual structure. Equals sum of App14 lines 1, 3, 9 and 10. The total sum of trade and other payables in this line should equal sum of current liabilities in line 13 of App12.*

The output of this line is calculated using a formula prepopulated in the data table.

Block B – Wholesale

Line 16 - Trade creditor days ~ water resources

*Forecast wholesale water resources trade payables for current liabilities divided by water resource operating expenditure in WS1, multiplied by 365 and based on the company's actual structure.*

Line 17 - Trade creditor days ~ water network plus

*Forecast wholesale water network plus trade payables for current liabilities divided by water network plus operating expenditure in WS1, multiplied by 365 and based on the company's actual structure.*

Line 18 - Trade creditor days ~ wastewater network plus

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*Forecast wholesale wastewater network plus trade payables for current liabilities divided by wastewater network plus operating expenditure in WWS1, multiplied by 365 and based on the company's actual structure.*

### Line 19 - Trade creditor days ~ bio resources

*Forecast wholesale bioresources trade payables for current liabilities divided by bioresources operating expenditure in WWS1, multiplied by 365 and based on the company's actual structure.*

### Line 20 - Trade creditor days ~ dummy control

*Forecast wholesale dummy control trade payables for current liabilities divided by dummy control operating expenditure in Dmmy1, multiplied by 365 and based on the company's actual structure.*

### Line 21 - Capex creditor days ~ wholesale

*Forecast wholesale capex creditors due within one year divided by wholesale capital expenditure in WS1 and WWS1, multiplied by 365 and based on the company's actual structure.*

Lines 16 to 20 report creditor days of 30 days throughout, in line with our target supplier payment times. (Note that Line 20 is an exception; we have left this line blank as it is not applicable to us.)

## Block C - Retail

### Line 22 - Residential retail advance receipts creditor days unmeasured

*Forecast number of unmeasured residential retail advance receipts creditor days based on the company's actual structure. Equals App14 line 6 divided by App13 line 15, multiplied by 365.*

### Line 23 - Residential retail advance receipts creditor days measured

*Forecast number of measured residential retail advance receipts creditor days based on the company's actual structure. Equals App14 line 7 divided by App13 line 16, multiplied by 365.*

### Line 24 - Business customers / business retail advance receipts creditor days unmeasured

*Forecast number of unmeasured business customers / business retail advance receipts creditor days based on the company's actual structure. Equals App14 line 8 divided by App13 line 17, multiplied by 365.*

### Line 25 - Business customers / business retail advance receipts creditor days measured

*Forecast number of measured business customers / business retail advance receipts creditor days based on the company's actual structure. Equals App14 line 9 divided by App13 line 18, multiplied by 365.*

The outputs of lines 22 to 25 are calculated using formulae prepopulated in the data table and link to App13, Trade receivables.

### Line 26 - Retail creditor months: Payment terms ~ Residential retail pays wholesaler in arrears (advance)

*Retail payment terms for payments from retailer to wholesaler. Enter in months. If pay in advance enter as negative number*

### Line 27 - Retail creditor months: Payment terms ~ Business retail pays wholesaler in arrears (advance)

*Retail payment terms for payments from retailer to wholesaler. Enter in months. If pay in advance enter as negative number*

Lines 26 and 27 report a zero value in all years as our company is structured such that the Wholesale and Retail business form part of the same legal entity, therefore all transactions between the two business areas are completed immediately.

Block D - Dividend creditors wholesale retail split

Line 28 - Dividend creditors ~ wholesale

*Forecast value of dividends due to creditors at the year end based on the company's actual capital structure for wholesale.*

Line 29 - Dividend creditors ~ residential retail

*Forecast value of dividends due to creditors at the year end based on the company's actual capital structure for residential retail.*

Line 30 - Dividend creditors ~ business retail

*Forecast value of dividends due to creditors at the year end based on the company's actual capital structure for business retail.*

All dividends are expected to be paid during the year in which they are declared, hence lines 28 to 30 report a zero for all of the forecast years. For further detailed on dividends, please see App18, Share capital and dividends, and its associated commentary.

Line 31 - Dividend creditors

*Forecast value of dividends due to creditors at the year end based on the company's actual capital structure. Sum of App14 lines 25 to 27.*

The output of this line is calculated using a formula prepopulated in the data table.

## App15 - Cashflow based on the actual company structure

Block A – Operating profit ~ actual company structure

Line 1 – Operating profit

*Forecast total historical cost operating profit based on the company's actual structure. Copied from App11 line 6.*

The output of this line is copied from App11 Line 7 using a formula prepopulated in the data table.

Line 2 - Other income

*Forecast total other income based on the company's actual structure. This includes rental income and income from investments (eg, share income) and excludes net interest and profit on disposals on fixed assets. Copied from App11 line 7.*

The output of this line is copied from App11 Line 7 using a formula prepopulated in the data table.

Block B - Adjustments ~ actual company structure

Line 3 – Depreciation

*Forecast value of depreciation based on the company's actual structure. This is the negative value of depreciation and amortisation of tangible and intangible assets. Equals App11 line 3 multiplied by -1.*

The output of this line is calculated using a formula prepopulated in the data table.

Line 4 – Amortisation

*Forecast value of amortisation based on the company's actual structure released to the income statement. This can include other non-cash adjustments such as amortisation of deferred grants, IFRIC18 revenue, profit on disposal of fixed assets. Equals App11 line 4 multiplied by -1.*

The output of this line is calculated using a formula prepopulated in the data table.

Line 5 - Changes in working capital ~ Inventories, trade and other receivables

*Forecast total movement in working capital in relation to inventories, trade and other receivables based on the company's actual structure.*

This line comprises the following components, calculated based on the movements in the relevant sections of the balance sheet (App12; see reconciliation below):

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
<b>Components</b>					
Movement in inventories	(0.062)	(0.063)	(0.065)	(0.066)	(0.067)
	<del>3.592</del>	<del>(1.211)</del>	<del>(0.080)</del>	<del>1.515</del>	<del>1.579</del>
Movement in trade and other receivables	3.591	(1.210)	(0.081)	1.516	1.580
<b>Line 5 total</b>	<b>3.530</b>	<b>(1.274)</b>	<b>(0.145)</b>	<b>1.449</b>	<b>1.512</b>
	<b>3.529</b>	<b>(1.273)</b>	<b>(0.146)</b>	<b>1.450</b>	<b>1.513</b>

<b>Reconciliation to App12</b>	2020 £m	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
App12 B8 - Inventories - actual capital structure	3.099	3.161	3.224	3.289	3.355	3.422
		<del>109.521</del>		<del>110.812</del>		<del>107.718</del>
App12 B9 - Trade and other receivables	113.113	109.522	110.732	110.813	109.297	107.717
		<del>112.682</del>		<del>114.101</del>		<del>111.140</del>
Total inventories, trade and other payables	116.212	112.683	113.956	114.102	112.652	111.139
		<del>3.530</del>	<del>(1.274)</del>	<del>(0.145)</del>	<del>1.449</del>	<del>1.512</del>
Increase in inventories, trade and other receivables		3.529	(1.273)	(0.146)	1.450	1.513

Line 6 - Changes in working capital ~ Trade and other payables

*Forecast total movement in working capital in relation to trade and other payables based on the company's actual structure.*

This line comprises the following components, calculated based on the movements in the relevant sections of the balance sheet (App12; see reconciliation below):

	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
<b>Components</b>					
Movement in trade and other payables	0.657 (0.220)	1.751 1.738	1.381 1.370	1.182 1.171	1.588 1.577
<b>Line 6 total</b>	<b>0.657 (0.220)</b>	<b>1.751 1.738</b>	<b>1.381 1.370</b>	<b>1.182 1.171</b>	<b>1.588 1.577</b>

<b>Reconciliation to App12</b>	2020 £m	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
App12 C13 - Trade and other payables	(77.550)	(78.207) (77.330)	(79.958) (79.068)	(81.339) (80.438)	(82.521) (81.609)	(84.109) (83.186)
Increase in trade and other payables		0.657 (0.220)	1.751 1.738	1.381 1.370	1.182 1.171	1.588 1.577

Note that this line does not include the movement in non-current trade and other payables (App12 E20) because those balances relate solely to interest accruals and therefore form part of the calculation of net interest paid (Line 10).

Line 7 - Changes in retirement benefits scheme provision

*Forecast total movement in retirement benefits provision based on the company's actual structure as contained in App12 line 23.*

This line represents movements in the retirement benefits scheme provision, being cash payments made in line with the defined benefit deficit recovery plan. These reconcile to movements in the relevant sections of the balance sheet (App12) as shown below:

<b>Reconciliation to App12</b>	2019-20 £m	2020-21 £m	2021-22 £m	2022-23 £m	2023-24 £m	2024-25 £m
App12 E24 - Retirement benefit obligations	(78.465)	(75.015)	(71.565)	(68.115)	(64.665)	(61.215)
Decrease in retirement benefit obligations		(3.450)	(3.450)	(3.450)	(3.450)	(3.450)

Line 8 - Changes in provisions

*Forecast total movement in current and non-current provisions for liabilities based on the company's actual structure, as contained in lines 17 and 24 of App12. This represents the negative value of any other non-cash profit and loss items which affect operating profit. This will include, but is not restricted to 1) movements in provisions and 2) the difference between pension contributions and the charge (to operating profit).*

The output of this line is calculated using a formula prepopulated in the data table.

Block C - Cash generated from operations ~ actual company structure

Line 9 - Cash generated from operations

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*Forecast total net cash flow movement from the operating activities of the company, based on the company's actual structure. Equals the sum of App15 lines 1 to 8.*

The output of this line is calculated using a formula prepopulated in the data table.

Block D - Interest and tax ~ actual company structure

Line 10 - Net interest paid

*Forecast total net interest paid based on the company's actual structure. This relates to net of interest received, interest paid, interest on finance lease rentals and non-equity dividends paid.*

Net interest paid is made up of the following items:

<b>Net interest paid</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>
Bond interest	(89.670)	(68.472)	(69.759)	(71.085)	(72.451)
Swap payments	(17.948)	(17.554)	(16.864)	(16.654)	(16.455)
Finance lease interest	(11.260)	(12.270)	(13.315)	(13.902)	(36.004)
EIB/KfW interest	(19.845)	(18.371)	(16.832)	(15.315)	(13.659)
Other finance costs	(6.254)	(6.361)	(6.471)	(6.585)	(6.701)
	<del>(15.292)</del>	<del>(26.777)</del>	<del>(31.947)</del>	<del>(36.318)</del>	<del>(43.334)</del>
Interest on new debt	(15.672)	(27.165)	(32.322)	(36.674)	(43.666)
Interest received	4.020	4.103	4.193	4.284	4.379
	<del>(156.249)</del>	<del>(145.702)</del>	<del>(150.994)</del>	<del>(155.574)</del>	<del>(184.224)</del>
App15 D10 - Net interest paid	(156.629)	(146.091)	(151.372)	(155.929)	(184.556)

There is a spike in finance lease interest in 2024-25. This is the result of some £200m of finance lease debt being repaid at the end of the lease terms, along with some £27m of accrued interest (which had been charged to the income statement in the relevant periods, but not paid out in cash).

Net interest paid reconciles to net interest payable per App11 as follows:

	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>
App15 D10 - Net interest paid	(156.629)	(146.091)	(151.372)	(155.929)	(184.556)
<i>Adjust for non-cash movements:</i>					
Indexation	(51.737)	(52.573)	(53.306)	(54.069)	(55.561)
Issue premium amortisation	0.765	0.765	0.765	0.765	0.765
Issue costs amortisation	(0.322)	(0.322)	(0.322)	(0.322)	(0.322)
Gilt lock amortisation	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)
Movement in interest accrual	1.556	2.569	4.147	4.799	26.992
	<del>(206.014)</del>	<del>(195.290)</del>	<del>(199.737)</del>	<del>(204.428)</del>	<del>(212.377)</del>
	(206.393)	(195.679)	(200.113)	(204.784)	(212.710)
App11 A8 - Interest income	4.020	4.103	4.193	4.284	4.379
	<del>(210.034)</del>	<del>(199.393)</del>	<del>(203.930)</del>	<del>(208.712)</del>	<del>(216.756)</del>
App11 A9 - interest expense	(210.413)	(199.782)	(204.306)	(209.068)	(217.089)
	<del>(206.014)</del>	<del>(195.290)</del>	<del>(199.737)</del>	<del>(204.428)</del>	<del>(212.377)</del>
Net interest	(206.393)	(195.679)	(200.113)	(204.784)	(212.710)

Line 11 - Tax paid

*Forecast total tax paid based on the company's actual structure. This should include all cash flows to or from taxation authorities (or other group companies) in respect of the company's revenue and capital profits including corporation tax paid / received and group taxation payments / receipts by the company in the year.*

We do not expect to pay any tax during the forecast period, therefore this line reports a £nil value throughout.

(Note that the only tax movements in the actual company financial tables, for example, App 11 line 15 and App 12 line 31, relate to deferred tax and have no cash impact.)

Block E - Net cash generated from operating activities ~ actual company structure

Line 12 - Net cash generated from operating activities

*Forecast total net cash generated from operating activities based on the company's actual structure. Equals the sum of App15 lines 9 to 11.*

The output of this line is calculated using a formula prepopulated in the data table.

Block F - Investing activities (net of grants and contributions) ~ actual company structure

Line 13 - Net capex

*Forecast total net purchase price of fixed assets paid after the deduction of any grants and contributions, based on the company's actual structure.*

Net capex reported in this line excludes the value of infrastructure renewals expenditure expensed to the income statement and reported within operating expenditure (App12 line 2), and therefore already included in operating profit in this table (line 1). It also takes into account the movement in capital creditors.

Net capex reconciles to our total capital investment for each of the forecast years as shown below:

	2020	2021	2022	2023	2024	2025
	£m	£m	£m	£m	£m	£m
<b>Reconciliation to total capex</b>						
App15 F13 - Net capex		(432.051)	(380.305)	(385.134)	(370.698)	(364.485)
Infrastructure renewals expenditure (inc in App11 A2 - Operating expenditure)		(442.397)	(391.115)	(396.087)	(381.787)	(375.717)
		(69.305)	(71.606)	(72.215)	(72.445)	(71.904)
Total capital programme payments		(501.356)	(451.911)	(457.349)	(443.143)	(436.389)
		(511.702)	(462.721)	(468.302)	(454.232)	(447.621)
App12 C14 - Capex creditor	(33.835)	(41.867)	(36.720)	(37.668)	(36.311)	(35.828)
	(34.375)	(42.746)	(37.610)	(38.570)	(37.224)	(36.752)
(Increase)/decrease in capex creditor		(8.032)	5.147	(0.948)	1.357	0.483
		(8.371)	5.136	(0.960)	1.346	0.472
<b>Total capital programme spend</b>		(509.388)	(446.764)	(458.297)	(441.786)	(435.906)
		(520.073)	(457.585)	(469.262)	(452.886)	(447.149)

Line 14 - Investment in other non-current assets

*Forecast total investment in other non-current assets after the deduction of grants and contributions, based on the company's actual structure. This line can be used for investing activities for loans to related parties.*

We do not expect to make (or redeem) any investment in other non-current assets during the forecast period, therefore this line reports a £nil value throughout.

Line 15 - Net cash used in investing activities

*Forecast total net cash flow of the company relating to the acquisition or disposal of any asset held as a fixed asset, based on the company's actual structure. Equals the sum of App15 lines 13 and 14.*

The output of this line is calculated using a formula prepopulated in the data table.

Block G - Net cash generated before financing activities ~ actual company structure

Line 16 - Net cash generated before financing activities

*Forecast total net cash generated before financing activities based on the company's actual structure. Equals the sum of App15 lines 12 and 15.*

The output of this line is calculated using a formula prepopulated in the data table.

Block H - Cash flows from financing activities ~ actual company structure

Line 17 - Equity dividends paid

*Forecast total equity dividend paid by the company in the year based on the company's actual structure. This includes any special dividends paid in the year.*

We expect to declare and pay ordinary dividends only during each year of the forecast period, therefore this line equals App18 Line 8, Ordinary dividend:

Reconciliation to App18	2020-21	2021-22	2022-23	2023-24	2024-25
	£m	£m	£m	£m	£m
App15 H17 - Equity dividends paid	(14.700)	(15.800)	(17.000)	(18.100)	(19.300)
App18 B8 - Ordinary dividend	14.700	15.800	17.000	18.100	19.300
Difference	-	-	-	-	-

Note the opposing polarities: a negative value is required in this table to report a cash outflow, while App18 requires a positive dividend distribution value for population of Ofwat's financial model.

Line 18 - Net loans received

*Forecast total receipts from any loans taken out in the year based on the company's actual structure. These include the proceeds of any loans taken out from other group companies.*

Our forecasts assume that all new borrowings will be drawn at a floating rate, as reported in App19 Line 4. Those drawings therefore form part of the cash inflow reported in this line.

In addition to loan receipts, we include in this line the total of loan repayments during each of the forecast years. Note that these comprise repayments of existing loans only; we have not forecast any repayments of new borrowings during the forecast period.

Net loans received as reported in this line comprises the following components and reconciles to App19 as shown below:

Reconciliation to App19	2021	2022	2023	2024	2025
	£m	£m	£m	£m	£m
App19 A4 - Fixed rate debt issued	-	-	-	-	-
	587.814	197.777	188.198	137.283	340.361
App19 A5 - Floating rate debt issued	588.633	197.544	187.591	136.567	339.554
App19 A6 - Index-linked debt issued	-	-	-	-	-
App19 A7 - Fixed rate debt repaid	(325.000)	-	-	-	-
App19 A8 - Floating rate debt repaid	(46.715)	(49.463)	(28.883)	(33.011)	(233.403)
App19 A9 - Index-linked debt repaid	(31.445)	(33.065)	(52.895)	(31.904)	(31.696)

	<b>184.654</b>	<b>115.249</b>	<b>106.420</b>	<b>72.368</b>	<b>75.262</b>
<b>App15 H18 - Net loans received</b>	<b>185.473</b>	<b>115.016</b>	<b>105.814</b>	<b>71.652</b>	<b>74.455</b>

**Line 19 - Cash inflow from equity financing**

*Forecast total net proceeds of any share issues received in the year, less the cost of any share buy backs and based on the company's actual structure.*

We do not expect to issue or redeem any share capital during the forecast period, therefore this line reports a value of £nil throughout.

**Line 20 – Net cash generated from financing activities**

*Forecast total net effect on cash flow after repaying the capital element of finance leases, raising /repaying loans and share issues and based on the company's actual structure. Equals the sum of App15 lines 17 to 19.*

The output of this line is calculated using a formula prepopulated in the data table.

**Block I - Increase or decrease in net cash ~ actual company structure**

**Line 21 - Increase or decrease in net cash**

*Forecast total net cash flow of the company in the year measured by the change in the level of cash based on the company's actual structure. Equals the sum of App15 lines 16 and 20.*

The output of this line is calculated using a formula prepopulated in the data table.

The movement in cash reconciles to the balance sheet (App12) movements as shown below:

<b>Reconciliation to App12</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>
	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>
App12 B11 - Cash and cash equivalents	100.000	100.000	100.000	100.000	100.000	100.000
Movement in cash and cash equivalents		-	-	-	-	-
App15 I21 - Increase or decrease in net cash		-	-	-	-	-
Difference		-	-	-	-	-

Note that the movement in net cash is £nil as our forecasts assume that new borrowings are drawn to balance cash to £100m as at 31 March in each year of the forecast period, therefore the sum of all cash inflows and outflows in any given year amounts to zero.

## App15a - Cashflow based on a notional company structure

We have used the Ofwat financial model to populate this table.

Block A - Operating profit ~ notional company structure

Line 1 Operating profit

*Forecast total historical cost operating profit based on a notional company structure.*

The output of this line is copied from App11a using a formula prepopulated in the data table.

Line 2 Other income

*Forecast total other income based on a notional company structure. This includes rental income and income from investments (e.g., share income) and excludes net interest and profit on disposals on fixed assets.*

The output of this line is copied from App11a using a formula prepopulated in the data table.

Block B - Adjustments ~ notional company structure

Line 3 Depreciation

*Forecast value of depreciation based on a notional company structure. This is the negative value of depreciation and amortisation of tangible and intangible assets.*

The output of this line is calculated using a formula prepopulated in the data table.

Line 4 Amortisation

*Forecast value of amortisation based on a notional company structure released to the income statement. This can include other non-cash adjustments such as amortisation of deferred grants, IFRIC18 revenue, profit on disposal of fixed assets.*

The output of this line is calculated using a formula prepopulated in the data table.

Line 5

Changes in working capital – inventories, trade and other receivables

*Forecast total movement in working capital in relation to inventories, trade and other receivables based on a notional company structure.*

This line comprises the following components, calculated based on the movements in the relevant sections of the balance sheet (App12a; see reconciliation below):

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
	£m	£m	£m	£m	£m	£m
<b>App 15a Line 5</b>						
Changes in working capital – Inventories, trade and other receivables		-4.121	-1.248	-0.096	1.795	1.686
<b>Reconciliation to App12a:</b>						
App12a Line 8	3.099	3.161	3.224	3.289	3.355	3.422
Inventories						
App12a Line 9	113.113	117.172	118.357	118.387	116.526	114.773
Trade and other receivables						
Total inventories, trade and other receivables	116.212	120.333	121.581	121.676	119.881	118.195
<b>Movement in inventories, trade and other receivables</b>		<b>4.121</b>	<b>1.248</b>	<b>0.095</b>	<b>-1.795</b>	<b>-1.686</b>

	2019-20 £m	2020-21 £m	2021-22 £m	2022-23 £m	2023-24 £m	2024-25 £m
<b>App 15a Line 5</b>						
Changes in working capital – Inventories, trade and other receivables		6.702	-1.342	-0.233	1.267	1.328
<b>Reconciliation to App12a:</b>						
App12a Line 8 Inventories	3.099	3.161	3.224	3.289	3.355	3.422
App12a Line 9 Trade and other receivables	113.113	106.349	107.628	107.795	106.462	105.067
Total inventories, trade and other receivables	116.212	109.51	110.852	111.084	109.817	108.489
<b>Movement in inventories, trade and other receivables</b>		<b>6.702</b>	<b>-1.342</b>	<b>-0.232</b>	<b>1.267</b>	<b>1.328</b>

Line 6 Changes in working capital – trade and other payables

*Forecast total movement in working capital in relation to trade and other payables based on a notional company structure.*

This line adjusts operating profit for movements in trade and other payables between the beginning and end of each year of AMP7. This line also includes the movement in the capex creditor which for the actual company in App15 is included in the Net Capex (line 13) capex creditor balances to derive the change in trade and other payables.

See reconciliation below.

	2019-20 £m	2020-21 £m	2021-22 £m	2022-23 £m	2023-24 £m	2024-25 £m
<b>App 15a Line 6</b>						
Changes in working capital ~ Trade and other payables		23.3	-3.2	2.6	0.1	1.4
<b>App12a</b>						
Line 13 Trade and other payables	-77.5	-98.5	-100.6	-102.3	-103.7	-105.6
Line 14 Capex creditor	-33.8	-36.2	-30.8	-31.7	-30.4	-29.9
Trade and other payables plus capex creditor	-111.39	-134.70	-131.46	-134.04	-134.10	-135.46
Movement in trade and other payables		-23.3	3.2	-2.6	-0.1	-1.4

	2019-20 £m	2020-21 £m	2021-22 £m	2022-23 £m	2023-24 £m	2024-25 £m
<b>App 15a Line 6</b>						
Changes in working capital ~ Trade and other payables		14.258	-3.319	2.325	-0.052	1.158
<b>App12a</b>						
Line 13 Trade and other payables	-77.549	-89.147	-91.143	-92.565	-93.872	-95.465
Line 14 Capex creditor	-34.375	-37.035	-31.72	-32.624	-31.265	-30.829
Trade and other payables plus capex creditor	-111.924	-126.182	-122.863	-125.189	-125.137	-126.294
Movement in trade and other payables		-14.258	3.319	-2.326	0.052	-1.157

**Line 7 Change in retirement benefits scheme provision**

*Forecast total movement in retirement benefits provision based on a notional company structure as contained in App12a line 23.*

Line 7 adjusts operating profit for the movement in the defined benefit pension scheme provision in each year of AMP7. As shown in the below table, this reconciles to the movement of retirement benefit obligations in App12a line 24. These values exclude the deficit repair contributions made by the Retail business, which are included in the actual company modelling.

	2019-20 £m	2020-21 £m	2021-22 £m	2022-23 £m	2023-24 £m	2024-25 £m
App 15a Line 7 Changes in retirement benefit scheme provision		-3.105	-3.103	-3.105	-3.104	-3.103
App12a Line 24 Retirement Benefit Obligations	-78.465	-75.360	-72.257	-69.151	-66.048	-62.944
Movement in retirement benefit obligations		3.105	3.103	3.106	3.103	3.104

**Line 8 Provisions**

*Forecast total movement in current and non-current provisions for liabilities based on a notional company structure, as contained in lines 18 and 25 of App12a. This represents the negative value of any other non-cash profit and loss items which affect operating profit. This will include, but is not restricted to 1) movements in provisions and 2) the difference between pension contributions and the charge (to operating profit).*

The output of this line is calculated using a formula prepopulated in the data table.

**Block C - Cash Generated from Operations**

*Forecast total net cash flow movement from the operating activities of the company, based on a notional company structure.*

The output of this line is calculated using a formula prepopulated in the data table.

**Block D - Interest and Tax**

**Line 10 Net interest paid**

*Forecast total net interest paid based on a notional company structure. This relates to net of interest received, interest paid, interest on finance lease rentals and non-equity dividends paid.*

This line reports forecast net cash interest paid in each year of AMP7. This is interest (income)/expense excluding indexation of index-linked loans.

**Line 11 Tax paid**

*Forecast total tax paid based on a notional company structure. This should include all cash flows to or from taxation authorities (or other group companies) in respect of the company's revenue and capital profits including corporation tax paid / received and group taxation payments / receipts by the company in the year.*

This line reports forecast tax paid in each year of AMP7. This refers to the corporation tax charge generated from the Retail business in the notional company which is shown in App11a line 14. We do not expect to pay any tax during the forecast period.

**Block E - Net Cash Generated from Operating Activities**

**Line 12 Net cash generated from operating activities**

*Forecast total net cash generated from operating activities based on a notional company structure.*

The output of this line is calculated using a formula prepopulated in the data table.

**Block F - Investing Activities (Net of Grants and Contributions)**

**Line 13 Net capex**

*Forecast total net purchase price of fixed assets paid after the deduction of any grants and contributions, based on a notional company structure.*

The capex in this line reconciles with the Capital expenditure net of grants and contributions in WS1, WWS1, R1 and R4.

**Line 14 Investment in other non-current assets**

*Forecast total investment in other non-current assets after the deduction of grants and contributions, based on a notional company structure. This line can be used for investing activities for loans to related parties.*

We do not expect to make or redeem any investment in other non-current assets during the forecast period of AMP7. For this reason, this line reports a nil value throughout.

**Line 15 Net cash used in investing activities**

*Forecast total net cash flow of the company relating to the acquisition or disposal of any asset held as a fixed asset, based on a notional company structure.*

The output of this line is calculated using a formula prepopulated in the data table.

**Block G - Net Cash Generated Before Financing Activities**

**Line 16 Net cash generated before financing activities**

*Forecast total net cash generated before financing activities based on a notional company structure.*

The output of this line is calculated using a formula prepopulated in the data table.

**Block H - Cash Flows from Financing Activities**

**Line 17 Equity dividends paid**

*Forecast total equity dividend paid by the company in the year based on a notional company structure. This includes any special dividends paid in the year.*

This line captures forecast notional dividends paid in each year of AMP7. We assume that all dividend are paid in the year they are declared.

**Line 18 Net loans received**

*Forecast total receipts from any loans taken out in the year based on a notional company structure. These include the proceeds of any loans taken out from other group companies.*

We have used the Ofwat financial model to populate this line.

This line reports the value of loans received during each year of AMP7, net of repayments made during the period. The Ofwat model does not raise or repay any loans during the period. All new borrowing requirements are included in the Cash and Cash equivalents lines.

**Line 19 Cash inflow from equity financing**

*Forecast total net proceeds of any share issues received in the year, less the cost of any share buy backs and based on a notional company structure.*

Line 19 captures the value of equity issued in each year of AMP7. It is not expected that the notional company will issue or redeem any share capital during the forecast period. For this reason, this line reports nil values throughout.

**Line 20 Net cash generated from financing activities**

*Forecast total net effect on cash flow after repaying the capital element of finance leases, raising /repaying loans and share issues and based on a notional company structure.*

The output of this line is calculated using a formula prepopulated in the data table.

**Block I - Increase or Decrease in Net Cash**

## Welsh Water Appointed Business Plan Table Commentaries

### Line 21 Increase or decrease in net cash

*Forecast total net cash flow of the company in the year measured by the change in the level of cash based on a notional company structure.*

The output of this line is calculated using a formula prepopulated in the data table.

## App16 - Tangible fixed assets

Note that in our statutory accounts and in the annual performance report we revalue our tangible fixed assets to the published regulatory capital value as at the balance sheet date. We have not applied that policy prospectively in these forecasts.

We have included our intangible fixed assets within this table in accordance with Ofwat's guidance as we expect their values to amortise over the forecast period. Note that this differs from our treatment in the statutory accounts and annual performance report, where intangible assets are shown on a separate line in the balance sheet.

Block A - Fixed asset cost at 31 March

Line 1 - Fixed asset cost at 31 March ~ wholesale water resources

Line 2 - Fixed asset cost at 31 March ~ wholesale water network plus

Line 3 - Fixed asset cost at 31 March ~ wholesale wastewater network plus

Line 4 - Fixed asset cost at 31 March ~ wholesale bioresources

Line 5 - Fixed asset cost at 31 March ~ wholesale dummy control

Line 6 - Fixed asset cost at 31 March ~ residential retail

Line 7 - Fixed asset cost at 31 March ~ business retail

*Forecast historical cost value of wholesale tangible fixed assets at the end of the financial year, split by price control. Calculated from the historical cost value of tangible fixed assets in App16 Block A for the previous year plus tangible fixed asset additions in the year in App16 Block B, less tangible fixed asset disposals in the year at cost in App16 Block C.*

Line 8 - Total fixed asset cost at 31 March

*Forecast total historical cost value of all tangible fixed assets at the end of the financial year. Equals the sum of App16 lines 1 to 7.*

With the exception of the opening balances, which have been built using our 31 March 2018 annual performance report data and AMP6 programme plan, the outputs of these lines are calculated using a formula prepopulated in the data table.

Block B - Fixed asset additions in the year

Line 9 - Fixed asset additions in the year ~ wholesale water resources

Line 10 - Fixed asset additions in the year ~ wholesale water network plus

Line 11 - Fixed asset additions in the year ~ wholesale wastewater network plus

Line 12 - Fixed asset additions in the year ~ wholesale bioresources

Line 13 - Fixed asset additions in the year ~ wholesale dummy control

Line 14 - Fixed asset additions in the year ~ residential retail

Line 15 - Fixed asset additions in the year ~ business retail

*Forecast wholesale tangible fixed asset additions in the year, split by price control.*

## Welsh Water Appointed Business Plan Table Commentaries

Line 16 - Total fixed asset additions in the year

*Forecast total of all tangible fixed asset additions in the year. Equals the sum of App16 lines 9 to 15.*

Total fixed asset additions are equal to the value of capital expenditure reported in Tables WS1 and WWS1 in outturn prices, plus Retail capital expenditure reported in Tables R1 and R4 and our estimate of the value of adopted assets (see commentary to App 12, Line 27 for further details on the latter):

	2021	2022	2023	2024	2025
	£m	£m	£m	£m	£m
<b>Additions</b>					
	<del>191.223</del>	<del>205.999</del>	<del>200.712</del>	<del>189.542</del>	<del>182.948</del>
WS1 L19	199.834	209.418	203.832	192.468	185.134
	<del>(14.711)</del>	<del>(12.992)</del>	<del>(13.137)</del>	<del>(13.180)</del>	<del>(13.208)</del>
WS1 L20	(7.755)	(6.116)	(6.339)	(6.458)	(6.560)
WWS1 L19	226.620	153.354	162.477	152.652	149.724
	<del>(9.690)</del>	<del>(9.782)</del>	<del>(9.870)</del>	<del>(9.901)</del>	<del>(9.916)</del>
WWS1 L20	(6.673)	(6.752)	(6.827)	(6.855)	(6.867)
<b>Total</b>	<b>393.442</b>	<b>336.579</b>	<b>340.182</b>	<b>319.113</b>	<b>309.548</b>
	<del>412.026</del>	<del>349.904</del>	<del>353.143</del>	<del>331.807</del>	<del>321.431</del>
Inflate to outturn	104.2	104.2	104.2	104.2	104.2
	111.6	113.8	116.1	118.4	120.8
	<del>421.383</del>	<del>367.588</del>	<del>379.032</del>	<del>362.601</del>	<del>358.862</del>
Wholesale	441.287	382.141	393.473	377.024	372.638
	<del>17.370</del>	<del>7.033</del>	<del>6.552</del>	<del>6.266</del>	<del>4.780</del>
R1	8.807	3.565	3.323	3.176	2.424
	<del>1.330</del>	<del>0.537</del>	<del>0.498</del>	<del>0.474</del>	<del>0.360</del>
R4	0.674	0.272	0.252	0.240	0.183
<b>Total capex</b>	<b>440.083</b>	<b>375.158</b>	<b>386.082</b>	<b>369.341</b>	<b>364.002</b>
	<del>450.768</del>	<del>385.978</del>	<del>397.048</del>	<del>380.440</del>	<del>375.245</del>
Add IFRIC 18 adopted assets	20.000	20.000	20.000	20.000	20.000
<b>Total per App16</b>	<b>460.083</b>	<b>395.158</b>	<b>406.082</b>	<b>389.341</b>	<b>384.002</b>
	<del>470.768</del>	<del>405.978</del>	<del>417.048</del>	<del>400.441</del>	<del>395.245</del>

Note that in our statutory accounts and in the annual performance report we revalue our tangible fixed assets to the published regulatory capital value as at the balance sheet date. We have not applied that policy prospectively in these forecasts.

Block C - Fixed asset disposals in the year at cost

Line 17 - Fixed asset disposals in the year at cost ~ wholesale water resources

Line 18 - Fixed asset disposals in the year at cost ~ wholesale water network plus

Line 19 - Fixed asset disposals in the year at cost ~ wholesale wastewater network plus

Line 20 - Fixed asset disposals in the year at cost ~ wholesale bioresources

Line 21 - Fixed asset disposals in the year at cost ~ wholesale dummy control

Line 22 - Fixed asset disposals in the year at cost ~ residential retail

Line 23 - Fixed asset disposals in the year at cost ~ business retail

*Forecast wholesale water resources tangible fixed asset disposals in the year at cost, split by price control.*

Line 24 - Total fixed asset disposals in the year at cost

*Forecast total of all tangible fixed asset disposals in the year at cost. Equals the sum of App16 lines 17 to 23.*

We have assumed that there are no asset disposals during the forecast period. In practice, it is likely that a small volume of low value disposals will take place, however it is commonly the case that we are unable to identify these on our asset register and as a consequence no write-off is visible in the notes to the accounts.

Block D - Fixed asset accumulated depreciation at 31 March

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 27 - Fixed asset accumulated depreciation at 31 March ~ wholesale wastewater network plus

Line 28 - Fixed asset accumulated depreciation at 31 March ~ wholesale bioresources

Line 29 - Fixed asset accumulated depreciation at 31 March ~ wholesale dummy control

Line 30 - Fixed asset accumulated depreciation at 31 March ~ residential retail

Line 31 - Fixed asset accumulated depreciation at 31 March ~ business retail

*Forecast wholesale tangible fixed asset accumulated depreciation at the end of the year, split by price control.*

Line 32 - Total fixed asset accumulated depreciation at 31 March

*Forecast total of all fixed tangible asset accumulated depreciation at the end of the year. Equals the sum of App16 lines 25 to 31.*

Depreciation is calculated based on the opening average asset lives by category of asset, adjusted annually in the forecasts for each year of additional spend.

Block E - Fixed asset net book value at 31 March

Line 33 - Fixed asset net book value at 31 March ~ wholesale water resources

Line 34 - Fixed asset net book value at 31 March ~ wholesale water network plus

Line 35 - Fixed asset net book value at 31 March ~ wholesale wastewater network plus

Line 36 - Fixed asset net book value at 31 March ~ wholesale bioresources

Line 37 - Fixed asset net book value at 31 March ~ wholesale dummy control

Line 38 - Fixed asset net book value at 31 March ~ residential retail

Line 39 - Fixed asset net book value at 31 March ~ business retail

*Forecast wholesale historical net book value of tangible fixed assets at the end of the year. Equals App16 line 1 minus line 25.*

Line 40 – Total fixed asset net book value at 31 March

*Forecast total historical net book value of all tangible fixed assets at the end of the year. Equals the sum of App16 lines 33 to 39.*

The outputs of these lines are calculated using a formula prepopulated in the data table.

Average asset lives for all fixed assets ~ legacy assets plus new additions

Line 41 - Average asset lives for all fixed assets ~ wholesale water resources

Line 42 - Average asset lives for all fixed assets ~ wholesale water network plus

Line 43 - Average asset lives for all fixed assets ~ wholesale wastewater network plus

Line 44 - Average asset lives for all fixed assets ~ wholesale bioresources

Line 45 - Average asset lives for all fixed assets ~ wholesale dummy control

Line 46 - Average asset lives for all fixed assets ~ residential retail

Line 47 - Average asset lives for all fixed assets ~ business retail

## Welsh Water Appointed Business Plan Table Commentaries

*Forecast average asset lives of all tangible fixed assets (legacy and new additions), split by price control.*

Line 48 - Total average asset lives for all fixed assets ~ legacy assets plus new additions

*Forecast average asset lives of all tangible fixed assets (legacy and new additions).*

Asset lives have been calculated annually by category, based on the closing balances in each year of the forecast period, and then averaged to generate an average life; **the total average is based on total closing balances in each year of the forecast period.**

## App17 - Appointee revenue summary

### Block A - Wholesale Revenue Requirement Aggregated by Building Blocks

#### Line 1

*PAYG*

Sum of lines 1 in tables Wr3, Wn3, WWn5, Bio4 and Dmmy7.

#### Line 2

*Pension deficit repair contributions*

Sum of lines 2 in tables Wr3, Wn3, WWn5, Bio4 and Dmmy7.

#### Line 3

*Run off on post 2020 investment and totex additions*

Sum of lines 3 in tables Wr3, Wn3, WWn5, Bio4 and Dmmy7.

#### Line 4

*Return on post 2020 investment and totex additions to RCV*

Sum of lines 4 in tables Wr3, Wn3, WWn5, Bio4 and Dmmy7.

#### Line 5

*Run off on RPI inflated 2020 RCV*

Sum of lines 5 in tables Wr3, Wn3, WWn5, Bio4 and Dmmy7.

#### Line 6

*Return on RPI inflated 2020 RCV*

Sum of lines 6 in tables Wr3, Wn3, WWn5, Bio4 and Dmmy7.

#### Line 7

*Run off on CPIH inflated 2020 RCV*

Sum of lines 7 in tables Wr3, Wn3, WWn5, Bio4 and Dmmy7.

#### Line 8

*Return on CPIH inflated 2020 RCV*

Sum of lines 8 in tables Wr3, Wn3, WWn5, Bio4 and Dmmy7.

#### Line 9

*Current tax ~ wholesale service*

Sum of lines 9 in tables Wr3, Wn3, WWn5, Bio4 and Dmmy7.

#### Line 10

*Re-profiling of allowed revenue*

Sum of lines 10 in tables Wr3, Wn3, WWn5, Bio4 and Dmmy7.

#### Line 11

*PR14 reconciliation adjustments ~ revenue*

Sum of lines 11 in tables Wr3, Wn3, WWn5, Bio4 and Dmmy7.

#### Line 12

*Total wholesale revenue requirement*

Sum of lines 1 to 11.

## Welsh Water Appointed Business Plan Table Commentaries

### Block B - Wholesale ~ other price control income

#### Line 13

*Third party revenue*

Sum of lines 13 in tables Wr3, Wn3, WWn5, Bio4 and Dmmy7.

### Block C - Wholesale non-price control income (third party services)

#### Line 14

*Bulk supplies*

Sum of lines 14 in tables Wr3, Wn3, WWn5, Bio4 and Dmmy7.

#### Line 15

*Bulk supplies ~ contract qualifying for water and wastewater trading incentives (to be signed on or after 1 April 2020)*

Sum of lines 15 in tables Wr3 and Wn3.

#### Line 16

*Rechargeable works*

Sum of lines 16 in tables Wr3, Wn3, WWn5, Bio4 and Dmmy7.

#### Line 17

*Other non-price control third party services*

Sum of lines 17 in tables Wr3, Wn3, WWn5, Bio4 and Dmmy7.

#### Line 18

*Total non-price control income (third party services)*

Sum of lines 14 to 17

### Block D - Wholesale non-price control income (principal services)

#### Line 19

*Wholesale non-price control income (principal services)*

Sum of line 19 in tables Wr3 and line 24 in tables Wn3, WWn5, Bio4 and Dmmy7.

### Block E - Wholesale charges

#### Line 20

*Wholesale unmeasured charge ~ residential*

Sum of lines 20 multiplied by lines 24 in tables Wr3, Wn3, WWn5, Bio4 and Dmmy7.

#### Line 21

*Wholesale unmeasured charge ~ business*

Sum of lines 21 multiplied by lines 24 in tables Wr3, Wn3, WWn5, Bio4 and Dmmy7.

#### Line 22

*Wholesale measured charge ~ residential*

Sum of lines 22 multiplied by lines 24 in tables Wr3, Wn3, WWn5, Bio4 and Dmmy7.

#### Line 23

*Wholesale measured charge ~ business*

Sum of lines 23 multiplied by lines 24 in tables Wr3, Wn3, WWn5, Bio4 and Dmmy7.

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Line 24

*Total wholesale charges*

Sum of lines 24 in tables Wr3, Wn3, WWn5, Bio4 and Dmmy7.

Block F - Grants and contributions

Line 25

~~*Wholesale grants and contributions (price control)*~~

*Wholesale operating expenditure grants and contributions (price control)*

Sum of lines 25 in tables Wr3, Wn3, WWn5 and Dmmy7.

Line 26

~~*Wholesale grants and contributions (non-price control)*~~

*Wholesale capital expenditure grants and contributions (price control)*

Sum of lines 26 in tables Wr3, Wn3, WWn5 and Dmmy7.

Line 27

*Wholesale operating expenditure grants and contributions (non-price control)*

Sum of lines 27 in tables Wr3, Wn3, WWn5 and Dmmy7.

Line 28

*Wholesale capital grants and contributions (non-price control)*

Sum of lines 28 in tables Wr3, Wn3, WWn5 and Dmmy7.

~~Block G - Revenue control total ~ wholesale~~

~~Line 27~~

~~*Total revenue control ~ wholesale*~~

~~Sum of lines 12 and 25.~~

~~Block H - Revenue control total ~ retail~~

~~Line 28~~

~~*Total revenue control ~ retail*~~

~~Sum of lines 19 and 22 in R7 indexed to 2017-018 prices using CPIH average in App23.~~

~~Block I - Revenue control total ~ appointee~~

~~Line 29~~

~~*Total revenue control ~ appointee*~~

~~Sum of line 27 and line 28.~~

Block G - Revenue control total ~ wholesale

Line 29

*Total revenue control ~ wholesale*

Sum of lines 12 and 25.

Block H - Revenue control total ~ retail

Line 30

*Total revenue control ~ retail*

Sum of lines 19 and 22 in R7 indexed to 2017-18 prices using CPIH average in App23.

Block I - Revenue control total ~ appointee

Line 31

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*Total revenue control ~ appointee*

Sum of line 29 and 30.

## App18 - Share capital and dividends

### Block A - Equity shares

#### Line 1 - Nominal share value

*Forecast nominal equity share value. If there is more than one type of share in issue, the nominal share value should be the weighted average nominal value of all the shares in issue at the year end.*

This line reports the forecast nominal equity share value. There is currently only one type of share in issue (ordinary shares) with a nominal value of £1 per share. We do not anticipate redeeming or issuing any further share capital during the forecast period.

#### Line 2 - Closing number of ordinary shares

*Forecast closing number of ordinary equity shares in issue at the year end.*

This line reports the forecast closing number of ordinary shares. We do not anticipate redeeming or issuing any further share capital during the forecast period.

#### Line 3 - Closing equity share value

*Forecast closing value of equity shares. Equals App18 line 1 multiplied by App18 line 2.*

The output of this line is calculated using a formula prepopulated in the data table.

#### Line 4 - Number of ordinary shares issued in the year

*Forecast number of new ordinary equity shares issued in the year.*

We do not anticipate issuing any share capital during the forecast period, therefore this line reports a zero value in all years.

#### Line 5 - Share premium

*Forecast total share premium on ordinary shares in issue at the end of the year.*

We do not anticipate any movements in share capital during the forecast period, therefore this line reports a zero value in all years.

#### Line 6 - Total called up share capital and share premium

*Forecast nominal value of the ordinary equity shares of the company based on the company's actual structure and which are issued and fully paid. Equals App18 line 3 plus line 5.*

The output of this line is calculated using a formula prepopulated in the data table.

### Block B - Equity dividends

#### Line 7 - Special ordinary dividend declared per share

*Forecast special ordinary dividend declared per share.*

We do not anticipate declaring any special ordinary dividends during the forecast period, therefore this line reports a zero value in all years.

#### Line 8 - Ordinary dividend

*Forecast ordinary dividend.*

This line has been used to report the value of ordinary dividends. In reality, this is our forecast cost of the company contribution towards providing Social Tariffs. In keeping with our ownership model, we therefore do not expect this to be realised as a dividend distribution to the shareholder, rather it will manifest itself as revenue foregone – thereby effectively being a distribution to customers.

#### Line 9 - Dividend yield

*Forecast ordinary dividends paid as a percentage of the equity component of the RCV (dividend / (RCV - net debt))*

The table guidance states, "Complete line 8, or lines 9 and 10 or line 11 depending on dividend policy." We have completed line 8 and entered a zero in line 9 (if we leave it blank, the table reports a validation error).

Line 10 - Real dividend growth

*Forecast growth in real dividends compared to the previous year.*

The table guidance states, "Complete line 8, or lines 9 and 10 or line 11 depending on dividend policy." We have completed line 8 and entered a zero in line 10 (if we leave it blank, the table reports a validation error).

Line 11 - Percentage of profits distributed

*Forecast dividends paid divided by the retained profits for the year before dividends.*

The table guidance states, "Complete line 8, or lines 9 and 10 or line 11 depending on dividend policy." We have completed line 8 and entered a zero in line 11 (if we leave it blank, the table reports a validation error).

Line 12 - Interim dividends

*Forecast value of dividends declared in the year which are also paid in the year.*

We anticipate paying all of our ordinary dividends as interim dividends, hence this line reports the same values as Line 8 above.

Line 13 - % of ordinary dividend paid as interim dividend

*Forecast percentage of ordinary dividend paid as interim dividend (interim dividends / ordinary dividends).*

Subject to the notes in the commentary to line 8 above, we anticipate paying all of the forecast ordinary dividends as interim dividends, hence this line reports a value of 100.00% in all of the years presented (being line 8 dividend by line 12).

Line 14 - % of dividends issued as scrip shares

*Forecast percentage of ordinary dividends declared in the year which are paid by way of scrip shares rather than in cash.*

We do not anticipate any movements in share capital during the forecast period, therefore this line reports a zero value in all years.

Block C - Preference shares

Line 15 - Preference shares

*Forecast shares on which a set rate of dividend is paid. The holders of preference shares are entitled to their dividend before ordinary shareholders and rank above ordinary shareholders should the company be wound up. Equals previous year value from App18 line 15 plus line 16 less line 17.*

We do not currently have any preference share capital in issue, and we do not anticipate issuing any during the forecast period, therefore this line reports a zero value in all years.

Line 16 - Preference shares issued in the year

*Forecast total value of new preference shares issued during the year.*

We do not currently have any preference share capital in issue, and we do not anticipate issuing any during the forecast period, therefore this line reports a zero value in all years.

Line 17 - Preference shares repaid in the year

*Forecast total value of preference shares which are repaid during the year.*

We do not currently have any preference share capital in issue, and we do not anticipate issuing any during the forecast period, therefore this line reports a zero value in all years.

Line 18 - Preference share dividends paid

*Forecast total dividends on preference shares paid during the year.*

We do not currently have any preference share capital in issue, and we do not anticipate issuing any during the forecast period, therefore this line reports a zero value in all years.

## App19 - Debt and interest costs

Companies are required to complete this table with their assumptions regarding the type and level of debt held and the associated interest costs which are reflected in their financial model. Debt should be categorised as fixed rate, floating rate or index-linked. The interest rates reported for the fixed rate and index-linked debt should be the coupon rate before indexation.

This table should reconcile to the borrowing figures entered in App12 and should exclude any amounts which have been reported as derivative financial instruments. If companies have capitalised any interest in any year, then this should be reported as debt issued in the year.

Companies should enter the cash interest rate that reflects what they pay on their debt. The interest rates will be used to drive the financial metrics in the financial model.

The interest rates reported should reflect the cash rates that are payable in the period. This might include the impact of derivatives but would exclude any mark to market adjustments.

In line with the guidance, this table excludes any amounts which have been reported as derivative financial instruments; in addition, no interest has been capitalised as part of the financial modelling, in accordance with the IFRS override in the RAGs which prohibits doing so.

	2020	2021	2022	2023	2024	2025	
	£m	£m	£m	£m	£m	£m	
App19 A1	Fixed rate debt (opening)	1,167.000	1,167.000	842.000	842.000	842.000	842.000
		<del>32.598</del>	<del>145.166</del>	<del>686.265</del>	<del>834.579</del>	<del>993.894</del>	<del>1,098.166</del>
App19 A2	Floating rate debt (opening)	37.809	157.204	699.122	847.203	1,005.911	1,109.467
App19 A3	Index-linked debt (opening)	2,237.669	2,271.889	2,292.180	2,311.688	2,312.098	2,334.264
		<del>3,437.267</del>	<del>3,584.055</del>	<del>3,820.445</del>	<del>3,988.267</del>	<del>4,147.992</del>	<del>4,374.430</del>
	<b>Total debt per App19</b>	<b>3,442.478</b>	<b>3,596.093</b>	<b>3,883.302</b>	<b>4,000.891</b>	<b>4,160.009</b>	<b>4,285.731</b>
	Add: items excluded from pp19						
	Deferred issue costs	(3.560)	(3.238)	(2.916)	(2.594)	(2.272)	(1.950)
	Gilt lock	(0.105)	(0.078)	(0.051)	(0.024)	0.003	0.030
	Issue premium	5.094	4.329	3.564	2.799	2.034	1.270
		<del>3,438.696</del>	<del>3,585.068</del>	<del>3,821.042</del>	<del>3,988.448</del>	<del>4,147.757</del>	<del>4,273.780</del>
	<b>Total borrowings</b>	<b>3,443.907</b>	<b>3,597.106</b>	<b>3,833.899</b>	<b>4,001.072</b>	<b>4,159.774</b>	<b>4,285.081</b>
App12 C15	Borrowings	(43.178)	(388.131)	(65.879)	(52.299)	(56.427)	(256.819)
		<del>(3,395.519)</del>	<del>(3,196.937)</del>	<del>(3,755.164)</del>	<del>(3,936.149)</del>	<del>(4,091.331)</del>	<del>(4,016.960)</del>
App12 E22	Borrowings	(3,400.729)	(3,208.975)	(3,768.020)	(3,948.773)	(4,103.347)	(4,028.261)
		<del>(3,438.697)</del>	<del>(3,585.068)</del>	<del>(3,821.043)</del>	<del>(3,988.448)</del>	<del>(4,147.758)</del>	<del>(4,273.779)</del>
	<b>Total borrowings</b>	<b>(3,443.907)</b>	<b>(3,597.106)</b>	<b>(3,833.899)</b>	<b>(4,001.072)</b>	<b>(4,159.774)</b>	<b>(4,285.080)</b>

### Block A – Debt

#### Line 1 – Fixed rate debt (opening)

Forecast amount of fixed rate debt held at the start of the review period. Equals the sum of App19 lines 1, 4 and 7 in the previous year.

In respect of 2019-20, this line reports the forecast amount of fixed rate debt held as at 31 March 2019. This is based on actual fixed rate debt held as at 31 March [2017] plus forecast new borrowings and repayments to 31 March 2020.

Subsequent years' column outputs are calculated using a formula prepopulated in the data table.

A breakdown of the amounts making up the total value of opening fixed rate debt reported in each year column is shown below. Note that there is a corresponding adjustment for the impact of the floating-to-fixed rate swap in App19 A2 (Line 2, below).

	2020 £m	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
<b>Bonds</b>						
A1	350.000	350.000	350.000	350.000	350.000	350.000
B1	325.000	325.000	-	-	-	-
B7	300.000	300.000	300.000	300.000	300.000	300.000
<b>Total bonds</b>	<b>975.000</b>	<b>975.000</b>	<b>650.000</b>	<b>650.000</b>	<b>650.000</b>	<b>650.000</b>
<b>Impact of floating-to-fixed rate swap</b>	<b>192.000</b>	<b>192.000</b>	<b>192.000</b>	<b>192.000</b>	<b>192.000</b>	<b>192.000</b>
<b>Fixed rate debt (opening)</b>	<b>1,167.000</b>	<b>1,167.000</b>	<b>842.000</b>	<b>842.000</b>	<b>842.000</b>	<b>842.000</b>

### Line 2 – Floating rate debt (opening)

*Forecast amount of floating rate debt held at the start of the review period. Equals the sum of App19 lines 2, 5 and 8 in the previous year.*

In respect of 2019-20, this line reports the forecast amount of floating rate debt held as at 31 March 2019. This is based on actual floating rate debt held as at 31 March [2017] plus forecast new borrowings and repayments to 31 March 2020.

Subsequent years' column outputs are calculated using a formula prepopulated in the data table.

A breakdown of the amounts making up the total value of opening floating rate debt reported in each year column is shown below. Note that there are corresponding adjustments for the impact of the floating-to-fixed rate swap in App19 A1 (Line 1, above) and the floating-to-RPI swaps in App19 A3 (Line 3, below).

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	2020 £m	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
<b>Finance leases</b>						
Lloyds	43.450	30.563	16.123	-	-	-
Lloyds 2	48.831	48.831	48.831	48.831	48.831	48.831
RBS 1	122.115	122.115	122.115	122.115	122.115	122.115
HSBC	48.976	48.976	48.976	48.976	48.976	48.976
RBS 2	29.356	29.356	29.356	29.356	29.356	29.356
Nord	20.880	20.312	19.666	18.937	18.119	17.205
Lloyds 3	29.950	29.950	29.950	29.950	29.950	29.950
RBS 3	80.372	80.371	80.370	80.369	80.368	80.367
<b>Total finance leases</b>	<b>423.930</b>	<b>410.474</b>	<b>395.387</b>	<b>378.534</b>	<b>377.715</b>	<b>376.800</b>
<b>Local authority loans</b>						
Local authority loans	0.214	-	-	-	-	-
EIB	22.727	13.636	4.545	-	-	-
EIB	65.000	55.000	45.000	35.000	25.000	15.000
EIB	93.750	83.750	73.750	63.750	53.750	43.750
KfW	60.000	60.000	57.462	49.398	41.334	29.238
	<del>76.588</del>	<del>215.194</del>	<del>787.563</del>	<del>968.275</del>	<del>1,126.578</del>	<del>1,254.956</del>
New borrowings	<b>81.798</b>	<b>227.231</b>	<b>800.419</b>	<b>980.898</b>	<b>1,138.594</b>	<b>1,266.257</b>
<b>Total term loans</b>	<b>319.279</b>	<b>427.580</b>	<b>968.320</b>	<b>1,116.423</b>	<b>1,246.662</b>	<b>1,342.944</b>
	<b>323.489</b>	<b>439.617</b>	<b>981.176</b>	<b>1,129.046</b>	<b>1,258.678</b>	<b>1,354.245</b>
<b>Impact of floating-to-fixed rate swap</b>	<b>(517.612)</b>	<b>(500.888)</b>	<b>(485.443)</b>	<b>(468.378)</b>	<b>(438.483)</b>	<b>(429.579)</b>
<b>Impact of floating-to-RPI swaps</b>	<b>(192.000)</b>	<b>(192.000)</b>	<b>(192.000)</b>	<b>(192.000)</b>	<b>(192.000)</b>	<b>(192.000)</b>
<b>Floating rate debt (opening)</b>	<b>32.597</b>	<b>145.166</b>	<b>686.264</b>	<b>834.579</b>	<b>993.894</b>	<b>1,098.165</b>
	<b>37.807</b>	<b>157.203</b>	<b>699.120</b>	<b>847.202</b>	<b>1,005.910</b>	<b>1,109.466</b>

**Line 3 – Index-linked debt (opening)**

*Forecast amount of index-linked debt held at the start of the review period. Equals the sum of App19 lines 3, 6, 9 and 10 in the previous year.*

In respect of 2019-20, this line reports the forecast amount of index-linked debt held as at 31 March 2019. This is based on actual index-linked debt held as at 31 March [2017] plus forecast new borrowings and repayments to 31 March 2020.

Subsequent years' column outputs are calculated using a formula prepopulated in the data table.

A breakdown of the amounts making up the total value of opening fixed rate debt reported in each year column is shown below. Note that there is a corresponding adjustment for the impact of the floating-to-RPI swaps in App19 A2 (Line 2, above).

	2020 £m	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
<b>Bonds (principal)</b>						
A4	265.000	265.000	265.000	265.000	265.000	265.000
A5	85.000	85.000	85.000	85.000	85.000	85.000
A6	100.000	100.000	100.000	100.000	100.000	100.000
B3	128.600	128.600	128.600	128.600	128.600	128.600
B4	75.000	75.000	75.000	75.000	75.000	75.000
B5	50.000	50.000	50.000	50.000	50.000	50.000
B6	260.000	260.000	260.000	260.000	260.000	260.000
<b>Total bonds (principal)</b>	<b>963.600</b>	<b>963.600</b>	<b>963.600</b>	<b>963.600</b>	<b>963.600</b>	<b>963.600</b>
<b>Term loan: EIB (principal)</b>	<b>230.000</b>	<b>230.000</b>	<b>214.000</b>	<b>198.000</b>	<b>175.000</b>	<b>152.000</b>
<b>Indexation</b>						
A4	170.933	184.011	197.481	211.355	225.646	240.365
A5	54.827	59.022	63.343	67.793	72.377	77.098
A6	44.847	49.192	53.668	58.278	63.026	67.917
B3	82.951	89.297	95.834	102.567	109.502	116.645
B4	48.377	52.078	55.891	59.818	63.862	68.028
B5	22.423	24.596	26.834	29.139	31.513	33.959
B6	78.421	88.574	99.031	109.802	120.896	132.323
EIB	23.677	30.630	37.055	42.958	48.193	52.750
<b>Total indexation</b>	<b>526.456</b>	<b>577.400</b>	<b>629.137</b>	<b>681.710</b>	<b>735.015</b>	<b>789.085</b>
<b>Impact of floating-to-RPI swaps</b>	<b>517.612</b>	<b>500.888</b>	<b>485.443</b>	<b>468.378</b>	<b>438.483</b>	<b>429.579</b>
<b>Index-linked debt (opening)</b>	<b>2,237.668</b>	<b>2,271.888</b>	<b>2,292.180</b>	<b>2,311.688</b>	<b>2,312.098</b>	<b>2,334.264</b>

#### Line 4 – Fixed rate debt issued

*Forecast amount of fixed rate debt issued each year of the review period.*

This line reports the forecast value of fixed rate debt issued in each of the years from 2019-20 to 2024-25 inclusive; note that values are £nil in all years as the forecasts do not include the raising of any fixed rate debt.

### Line 5 – Floating rate debt issued

*Forecast amount of floating rate debt issued each year of the review period.*

This line reports the forecast value of fixed rate debt issued in each of the years from 2019-20 to 2024-25 inclusive.

All forecast new debt is at a floating rate, and the forecast values are those required to balance closing cash to £100 million.

In accordance with the guidelines, borrowings exclude any amounts which have been reported as derivative financial instruments. However, in analysing debt between fixed rate, floating rate and index-linked the impact of such derivatives has been overlaid. To that end, the annual movement (reduction) in the notional value of the floating-to-RPI swaps has been included in this line as a new issue of floating rate debt, as it is the amount by which the reported value of index-linked debt reduces as a result of a reduction in the notional value of the swaps (note the corresponding adjustment to floating rate debt repaid, App19 A9 below).

	2020 £m	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
<b>Term loans</b>						
	138.606	572.369	180.712	158.303	128.379	331.665
New borrowings	145.433	573.188	180.479	157.696	127.663	330.858
<b>Total term loans</b>	<del>138.606</del> 145.433	<del>572.369</del> 573.188	<del>180.712</del> 180.479	<del>158.303</del> 157.696	<del>128.379</del> 127.663	<del>331.665</del> 330.858
<b>Movement in notional value of RPI swaps</b>	16.724	15.445	17.065	29.895	8.904	8.696
<b>Floating rate debt issued</b>	<del>155.330</del> 162.157	<del>587.814</del> 588.633	<del>197.777</del> 197.544	<del>188.198</del> 187.591	<del>137.283</del> 136.567	<del>340.361</del> 339.554

### Line 6 – Index-linked debt issued

*Forecast amount of index-linked debt issued each year of the review period.*

This line reports the forecast value of index-linked debt issued in each of the years from 2019-20 to 2024-25 inclusive; note that values are £nil in all years as the forecasts do not include the raising of any index-linked debt.

### Line 7 – Fixed rate debt repaid

*Forecast amount of fixed rate debt repaid each year of the review period.*

This line reports the forecast value of fixed rate debt repaid in each of the years from 2019-20 to 2024-25 inclusive.

The only forecast repayment of fixed rate debt is of the £325 million Class B1 6.907% fixed rate bonds on 31 March 2021.

### Line 8 – Floating rate debt repaid

*Forecast amount of floating rate debt repaid each year of the review period.*

This line reports the forecast value of fixed rate debt repaid in each of the years from 2019-20 to 2024-25 inclusive, as analysed below. Note that no principal repayments of new borrowings have been assumed during the period.

	2020 £m	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
<b>Finance leases</b>						
Lloyds	(12.888)	(14.439)	(16.123)	-	-	-
Lloyds 2	-	-	-	-	-	(48.824)
RBS 1	-	-	-	-	-	(122.042)
Nord	(0.568)	(0.646)	(0.729)	(0.818)	(0.914)	(0.979)
Lloyds 3	-	-	-	-	-	(29.945)
RBS 3	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
<b>Total finance leases</b>	<b>(13.457)</b>	<b>(15.086)</b>	<b>(16.853)</b>	<b>(0.819)</b>	<b>(0.915)</b>	<b>(201.791)</b>
<b>Term loans</b>						
Local authority loans	(0.214)	-	-	-	-	-
EIB	(9.091)	(9.091)	(4.545)	-	-	-
EIB	(10.000)	(10.000)	(10.000)	(10.000)	(10.000)	(7.500)
EIB	(10.000)	(10.000)	(10.000)	(10.000)	(10.000)	(10.000)
KfW	-	(2.538)	(8.064)	(8.064)	(12.096)	(14.112)
New borrowings	-	-	-	-	-	-
<b>Total term loans</b>	<b>(29.305)</b>	<b>(31.629)</b>	<b>(32.609)</b>	<b>(28.064)</b>	<b>(32.096)</b>	<b>(31.612)</b>
<b>Floating rate debt repaid</b>	<b>(42.762)</b>	<b>(46.715)</b>	<b>(49.462)</b>	<b>(28.883)</b>	<b>(33.011)</b>	<b>(233.403)</b>

### Line 9 – Index-linked debt repaid

*Forecast amount of index-linked debt repaid each year of the review period.*

This line reports the forecast value of index-linked debt repaid in each of the years from 2019-20 to 2024-25 inclusive, as analysed below.

In accordance with the guidelines, borrowings exclude any amounts which have been reported as derivative financial instruments. However, in analysing debt between fixed rate, floating rate and index-linked they do overlay the impact of such derivatives. To that end, the annual movement (reduction) in the notional value of the floating-to-RPI swaps has been included in this line as a repayment of index-linked debt, as it is the amount by which the reported value of index-linked debt reduces as a result of a reduction in the notional value of the swaps (note the corresponding increase in floating rate debt issued, App19 A5 above).

	2020 £m	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
<b>Term loans</b>						
EIB	-	(16.000)	(16.000)	(23.000)	(23.000)	(23.000)
<b>Total term loans</b>	-	<b>(16.000)</b>	<b>(16.000)</b>	<b>(23.000)</b>	<b>(23.000)</b>	<b>(23.000)</b>
<b>Movement in notional value of RPI swaps</b>	<b>(16.724)</b>	<b>(15.445)</b>	<b>(17.065)</b>	<b>(29.895)</b>	<b>(8.904)</b>	<b>(8.696)</b>
<b>Index-linked debt repaid</b>	<b>(16.724)</b>	<b>(31.445)</b>	<b>(33.065)</b>	<b>(52.895)</b>	<b>(31.904)</b>	<b>(31.696)</b>

#### Line 10 – Indexation of index-linked loans

*Forecast indexation applicable to the index-linked debt.*

This line reports the forecast value of the indexation charge relating to index-linked debt in each of the years from 2019-20 to 2024-25 inclusive. All indexation charges result in accretion of the loan principal and are not paid out as cash except on maturity of the loan; no such maturities are forecast in the period to 2025.

The company has a number of derivative contracts which swap finance lease and term loan liabilities from a floating rate to the Retail Prices Index. Coupon rates are paid annually in cash and the notional value of the swaps reduce accordingly over their lifetime, with a corresponding adjustment to their carrying fair values at the balance sheet date. No values relating to such swap contracts are reported in this line.

#### Block B – Interest rates and financing costs

##### Line 11 – Interest rate for existing fixed rate debt

*Forecast interest rate applicable to the existing fixed rate debt (nominal).*

This line reports the weighted average forecast interest rate for existing fixed rate debt. The rate shifts from 5.4% to 4.8% between 2020-21 and 2021-22 as a result of repaying £325m 6.907% fixed rate B1 bonds on 31 March 2021.

**Line 12 – Interest rate for new fixed rate debt**

*Forecast nominal coupon rate applicable for new fixed rate debt.*

While our financing forecasts for the actual company do not include the raising of any fixed rate debt, we have estimated that this might be raised at around 3.50%, representing a premium of 45 basis points over our modelled new floating rate debt (3.05%, being assumed 12-month LIBOR of 2.25% plus a margin of 80 basis points).

**Line 13 – Interest rate for existing index-linked debt**

*Forecast real coupon rate (before indexation) applicable to the existing index-linked debt.*

This line reports the weighted average forecast real coupon rate for existing index-linked debt. The rate shifts from 1.2% to 1.8% over the period as a result of the reduction in notional values of our floating to index-linked swaps.

**Line 14 – Interest rate for new index-linked debt**

*Forecast real coupon rate (before indexation) application to the new index-linked debt.*

While our financing forecasts for the actual company do not include the raising of any index-linked debt, we have estimated that this might be raised at around 0.50%, a margin of 50 basis points on our Retail Prices Index inflation assumptions.

**Line 15 – Weighted average interest rate for new and existing fixed rate debt**

*Forecast nominal coupon rate/interest rate for new/existing fixed rate debt, weighted.*

Our financing forecasts for the actual company do not include the raising of any fixed rate debt, therefore this line, B15, is the same as the interest rate for existing fixed rate debt, line B11.

**Line 16 – Weighted average interest rate for new and existing index-linked debt**

*Forecast nominal coupon rate/interest rate for new/existing index-linked debt, weighted.*

Our financing forecasts for the actual company do not include the raising of any index-linked debt, therefore this line, B16, is the same as the interest rate for existing index-linked rate debt, line B13.

**Line 17 – Floating rate debt interest paid**

*Forecast amount of nominal interest paid on floating rate debt.*

This line reflects interest payable on existing floating rate debt, as well as new debt: note that all of our new borrowings are assumed to be at a floating rate of 80 basis points over our 12-month LIBOR

assumption of 2.25% over the AMP7 period (2.00% in 2019-20). The total payable therefore rises steeply over the period.

### Line 18 – Bank interest rate (receivable)

*Forecast interest rate (nominal) receivable on bank deposits.*

Our modelling assumes that cash interest is received at 50% of the forecast prevailing 12-month LIBOR rate as at 1 April on the opening balance of cash held.

At 31 March	2020	2021	2022	2023	2024	2025
Interest receivable on cash deposits	£000	£000	£000	£000	£000	£000
Opening cash	100,000	100,000	100,000	100,000	100,000	100,000
Interest receivable	1,000	1,125	1,125	1,125	1,125	1,125
<b>APP19 B18</b>	<b>1.00%</b>	<b>1.13%</b>	<b>1.13%</b>	<b>1.13%</b>	<b>1.13%</b>	<b>1.13%</b>
12-month LIBOR	2.00%	2.25%	2.25%	2.25%	2.25%	2.25%

### Line 19 – Interest receivable (other)

*Forecast amount of interest (nominal) receivable from sources other than bank deposits.*

This line represents the forecast value of income received from the Elan Valley Trust Fund. In 1984, Welsh Water Authority entered into a conditional sale and purchase agreement with Severn Trent Water Authority for the sale of the aqueduct and associated works by which the bulk supply from the Elan Valley to Severn Trent reservoirs is conveyed.

The sum of £31.7m, representing the consideration for the sale, was invested in a trust fund. The principal function of the fund was to provide an income to Welsh Water Authority, whilst preserving the capital value of the fund in real terms. Welsh Water Authority's interest in this fund was vested in Dŵr Cymru Cyfyngedig under the provisions of the Water Act 1989.

The assets of the fund are not included in the financial statements of Dŵr Cymru Cyfyngedig: income is received by way of interest and occasional capital distributions (to the extent that the value of the fund exceeds its value in 'real' terms).

As at 31 March 2018 the value of the fund was £115m and interest income amounted to £2.8m for the year then ended. In forecasting future income we have assumed capital growth in line with RPI and preserved the 2018 return of 2.37%:

## Welsh Water Appointed Business Plan Table Commentaries

At 31 March	2020	2021	2022	2023	2024	2025
Elan Valley Trust Fund	£000	£000	£000	£000	£000	£000
Opening market value	118,476	122,033	125,671	129,431	133,311	137,313
<b>APP19 B19</b>	<b>2,805</b>	<b>2,895</b>	<b>2,978</b>	<b>3,068</b>	<b>3,159</b>	<b>3,254</b>
Return preserved at 2017/18 level	2.37%	2.37%	2.37%	2.37%	2.37%	2.37%

### Line 20 – Bank overdraft interest rate

*Forecast interest rate (nominal) payable on bank overdrafts.*

Our actual company forecasts assume that no bank overdraft is drawn upon, however we have reported an indicative value here for completeness, being payable at a margin of 130 basis points over our 12-month LIBOR assumption of 2.25% over the AMP7 period (2.00% in 2019-20).

### Line 21 – Residential retail working capital financing cost rate

*Forecast residential retail working capital financing cost rate.*

Our forecasts do not model residential retail working capital separately from that of the appointee as a whole, however we have completed this table with our forecast of an arm's length fixed rate that we might reasonably expect a small or medium-sized entity to procure borrowings for working capital purposes (this is in line with intra-group loans made outside of our whole business securitisation for the purpose of funding limited levels of commercial activity).

### Line 22 – Business retail working capital financing cost rate

*Forecast business retail working capital financing cost rate – if exited from business retail market can be left blank.*

Our forecasts do not model business retail working capital separately from that of the appointee as a whole, however we have completed this table with our forecast of an arm's length fixed rate that we might reasonably expect a small or medium-sized entity to procure borrowings for working capital purposes (this is in line with intra-group loans made outside of our whole business securitisation for the purpose of funding limited levels of commercial activity).

## Block C - Adjustments for reconciliation with balance sheet

**Line 23 - Fixed rate debt adjustment for reconciliation with balance sheet**

**Line 24 - Floating rate debt adjustment for reconciliation with balance sheet**

**Line 25 - Index-linked debt adjustment for reconciliation with balance sheet**

**Line 26 - Other adjustment for reconciliation with balance sheet**

## Welsh Water Appointed Business Plan Table Commentaries

*Fixed rate, floating rate, index-linked debt and other adjustments for reconciliation with balance sheet (App12)*

There are very few differences between our debt reported in App19 and the total borrowings reported on lines 15 and 22 of App12. We have therefore put a single adjusting value in line 26 and not split the items between lines 23 to 25. The largest adjustment is of **£1.429m (0.04%)**, in 2019-20. The reconciling items are shown below. While the deferred issue costs, gilt lock and issue premium are treated as part of borrowings for accounting purposes under IFRS (and hence included as such in App12), they do not form part of the principal values to which coupon rates apply and have therefore been excluded from App19.

		2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
		£m	£m	£m	£m	£m	£m
App19 A1	Fixed rate debt (opening)	1,167.000	1,167.000	842.000	842.000	842.000	842.000
			145.166	686.265	834.579	993.894	1,098.166
App19 A2	Floating rate debt (opening)	37.809	157.204	699.122	847.203	1,005.911	1,109.467
App19 A3	Index-linked debt (opening)	2,237.669	2,271.889	2,292.180	2,311.688	2,312.098	2,334.264
			<del>3,584.055</del>	<del>3,820.445</del>	<del>3,988.267</del>	<del>4,147.992</del>	<del>4,274.430</del>
	<b>Total debt per App19</b>	<b>3,442.478</b>	<b>3,596.093</b>	<b>3,833.302</b>	<b>4,000.891</b>	<b>4,160.009</b>	<b>4,285.731</b>
<i>Add: items excluded from App19</i>							
	Deferred issue costs	(3.560)	(3.238)	(2.916)	(2.594)	(2.272)	(1.950)
	Gilt lock	(0.105)	(0.078)	(0.051)	(0.024)	0.003	0.030
	Issue premium	5.094	4.329	3.564	2.799	2.034	1.270
App19 C26	<b>Reconciling adjustment</b>	<b>1.429</b>	<b>1.013</b>	<b>0.597</b>	<b>0.181</b>	<b>(0.235)</b>	<b>(0.650)</b>
			<del>3,585.068</del>	<del>3,821.042</del>	<del>3,988.448</del>	<del>4,147.757</del>	<del>4,273.780</del>
	<b>Total borrowings</b>	<b>3,443.907</b>	<b>3,597.106</b>	<b>3,833.899</b>	<b>4,001.072</b>	<b>4,159.774</b>	<b>4,285.081</b>
App12 C15	Borrowings	(43.178)	(388.131)	(65.879)	(52.299)	(56.427)	(256.819)
			<del>(3,196.937)</del>	<del>(3,755.164)</del>	<del>(3,936.149)</del>	<del>(4,091.331)</del>	<del>(4,016.960)</del>
App12 E22	Borrowings	(3,400.729)	(3,208.975)	(3,768.020)	(3,948.773)	(4,103.347)	(4,028.261)
			<del>(3,585.068)</del>	<del>(3,821.043)</del>	<del>(3,988.448)</del>	<del>(4,147.758)</del>	<del>(4,273.779)</del>
	<b>Total borrowings</b>	<b>(3,343.907)</b>	<b>(3,597.106)</b>	<b>(3,833.899)</b>	<b>(4,001.072)</b>	<b>(4,159.774)</b>	<b>(4,285.080)</b>

## App20 - Cost of debt-analysis of debt

### Lines 1 - 201 Fixed Rate Instruments

*For the fixed rate debt in block A, the real coupon rate is calculated as  $((1+\text{nominal interest rate})-(1+RPI))-1$*

Lines 4-8: European Investment Bank (“EIB”) loans totalling £192 million have been swapped from floating rate to a fixed rate of 5.67%. There are no credit breaks in this swap. The swap matures in 2031. The EIB loans amortise at a rate of approximately £21 million per annum.

### Line 202 - 402 Floating Rate instruments

*For the floating rate debt in block B the nominal interest rate is calculated as the sum of the reference interest rate and the margin. The real coupon is calculated as for the fixed rate debt in block A*

Lines 202–205: All our Revolving Credit Facilities (“RCFs”), totalling £170 million, are currently undrawn. The RCFs currently expire in 2020, we expect to renew these RCFs during 2019 such that they will be renewed on expiry.

### Lines 403 - 603 RPI linked instruments

*For the index linked debt in block C the Nominal interest rate is calculated as  $(1+\text{the real coupon rate})*(1+RPI)-1$ .*

Lines 413-423: These loans and finance leases are floating rate loans that have been swapped from floating rate to index-linked debt. There are no credit breaks in any of these swaps.

### Lines 604 – 804 CPI linked instruments

*For the index linked debt in block D the Nominal interest rate is calculated as  $(1+\text{the real coupon rate})*(1+CPI)-1$ .*

The company does not have any CPI-linked debt in issuance.

### Line 805 Totals for all instruments

*Totals for all instruments.*

None of the swaps in Dŵr Cymru are subject to credit breaks.

### Lines 806 – 807 Inflation Assumptions

*Assumed value of the Retail Prices Index used to derive a nominal rate for RPI linked debt*

We have input an assumption of 2.8% for RPI. This is consistent with the Updated guidance for the final business plan data tables 18 May 2018.

*Assumed value of the Consumer Prices Index used to derive a nominal rate for CPI linked debt – not applicable (the company does not have CPI-linked debt)*

### Lines 808 – 809 Indicative interest rates

*Calculated as the total nominal interest cost divided by total principal outstanding*

Calculated cells.

### Lines 810 – 816 Indicative debt portfolio

*Calculated as the sum of floating rate debt divided by the sum of all debt. Equals App20 line 402 divided by App20 line 805.*

*Calculated as the sum of fixed rate debt divided by the sum of all debt. Equals App20 line 201 divided by App20 line 805.*

*Calculated as the sum of RPI linked rate divided by the sum of all debt. Equals App20 line 603 divided by App20 line 805.*

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*Calculated as the sum of CPI linked debt divided by the sum of all debt. Equals App20 line 804 divided by App20 line 805.*

*Calculated as the sum of RPI and CPI linked debt divided by the sum of all debt. Equals App20 lines 603 and 804 divided by App20 line 805.*

*Calculated as the sum of RPI and CPI linked debt and fixed rate debt divided by the sum of all debt. Equals App20 line 811 plus App20 line 814.*

*Calculated as (the sum of the principal outstanding on each debt instrument times its years to maturity) divided by the total principal outstanding.*

**Calculated cells.**

## App21 - Direct procurement for customers

We have reviewed our investment plan and, at this stage, have not found any schemes that we are putting forward for direct procurement. The details of our assessment are set out in the supporting information provided section 5.7 PR19 Direct procurement report.

## App22 - Pensions

Block A – Accounting charge included in regulatory accounts for Defined Benefit schemes  
Lines 1-6

This block reports the accounting charge for the defined benefits schemes split between services. The company operates a funded defined benefit scheme (based on final pensionable salary and pensionable service). The assets of the scheme are held in a separate trustee administered fund.

The following changes have occurred regarding the Defined Benefit scheme:

- Closed to new members from 31 December 2005
- Closed for future accruals from 1 April 2018 for most members such that the scheme only has 18 active members from 1 April 2018

The accounting charge shown in this table has been derived as follows:-

- Quantum Advisory (QA) have prepared the 2013 and 2014 accounting charge under FRS102 in line with the table guidance (previously reported under UK GAAP). The main changes relate to the calculation of the expected return on assets and the inclusion of a charge representing the non-investment fees paid through the Scheme
- 2015 to 2018 charge has been derived from the pension charge disclosed in the accounts (as calculated by QA). These are all based on FRS102.
- 2019 to 2025 charge is based on actuarial projections of the current service costs for future years. This projection involves rolling forward the service costs figure on an approximate basis to allow for the ageing of the members. The 31 March 2018 liabilities were calculated assuming future RPI growth (which applies over a period of 40+ years) of 3.1%, and the liability projections over the period to 2025 assumed that this remained an appropriate long term assumption.
- The charge up to 2018 also includes the costs for the company's obligation under the Employer Financed Retirement Benefit scheme which amounts to :

		2013	2014	2015	2016	2017	2018
EFURBS charge	£m	0.7	0.7	0.6	0.1	0.8	1.5

There is no provision for this included from 2019 onwards

The accounting charge is made up as follows:

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
	Outturn (nominal) £m												
<b>Accounting charge</b>	11.3	10.2	9.5	10.0	5.6	1.8	0.3	0.4	0.4	0.4	0.4	0.4	0.5
<b>% increase</b>		-9%	-7%	4%	-44%	-68%	-80%	9%	0%	5%	7%	6%	6%
	Outturn (nominal) (£m)						2017-18 FYA (CPIH deflated) (£m)						
<b>Accounting charge in table 22</b>	11.3	10.2	9.5	10.0	5.6	1.8	0.3	0.4	0.3	0.4	0.4	0.4	0.4

The accounting charge starts to reduce from 2017 which reflects the closure of the DB scheme. For 2013 to 2018 the split between services was calculated by allocating each members contribution to the service that they were being charged to in that year. For the remaining years the splits used are the same as for 2018 as it is assumed that the 18 members that are still in the scheme will not move roles.

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Charge for DB schemes	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
residential retail	10%	13%	13%	12%	14%	16%	16%	16%	16%	16%	16%	16%	16%
business retail	2%	2%	2%	2%	2%	2%	1%	1%	1%	1%	2%	2%	2%
wholesale water resources	4%	3%	4%	4%	4%	12%	12%	12%	12%	12%	12%	12%	12%
wholesale water network plus	48%	47%	47%	47%	45%	49%	49%	49%	49%	50%	49%	50%	49%
wholesale wastewater bioresources	4%	3%	3%	4%	4%	4%	4%	4%	3%	3%	4%	3%	4%
wholesale wastewater network plus	32%	31%	30%	31%	31%	18%	18%	18%	18%	18%	18%	18%	18%

Lines 7

There are no costs attributable to the wholesale dummy control.

Lines 8 and 9

The proportion of the wholesale charge capitalised relates to pension costs capitalised as part of capitalised staff costs.

This has been derived by taking the average capitalised salaries as shown in the regulatory accounts. For 2019 onwards have assumed the same rate as for 2018.

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Wholesale water capitalised	38%	42%	41%	37%	36%	36%	36%	36%	36%	36%	36%	36%	36%
Wholesale waste water capitalised	38%	42%	41%	37%	36%	36%	36%	36%	36%	36%	36%	36%	36%

Block B – Accounting charge included in regulatory accounts for Defined Contribution schemes

Lines 10-16

This block reports the accounting charge for defined benefits scheme split between services.

For 2013 to 2018 this charge has been derived by using the total contributions paid in the year and deducting all those that relate to defined benefit contribution.

For the remaining years this has taken the pension charge included in the operating cost forecasts (which includes headcount reductions).

The charge to appointed business is shown as follows:

Defined contribution	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
	Outturn (nominal) £m												
Accounting charge	2.5	3.9	4.5	5.1	7.9	10.7	11.1	11.4	12.1	12.1	12.3	12.6	12.9
% increase		55%	13%	14%	54%	36%	4%	3%	6%	0%	2%	2%	2%
	Outturn (nominal) (£m)						2017-18 FYA (CPIH deflated) (£m)						
Accounting charge in table 22	2.5	3.9	4.5	5.1	7.9	10.7	11.1	11.4	10.6	10.4	10.3	10.2	10.1

The increase in 2014 and 2015 relate to auto-enrolment and insourcing of our customer services staff.

The increase in 2017 and 2018 reflects the closure of the Defined Benefit scheme and all employees (apart from 18) transferring to the Defined Contribution scheme.

For 2013 to 2018 the split between services was calculated by allocating each members contribution to the service that they were being charged to in that year. For the remaining years the splits used are the same as for 2018.

The split is as follows:

Defined Contribution split	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
<b>residential retail</b>	7%	7%	12%	11%	10%	12%	18%	18%	18%	18%	18%	18%	18%
<b>business retail</b>	2%	2%	1%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%
<b>wholesale water resources</b>	5%	4%	4%	4%	5%	4%	4%	4%	4%	4%	4%	4%	4%
<b>wholesale water network plus</b>	39%	39%	37%	39%	43%	43%	39%	39%	39%	39%	39%	39%	39%
<b>wholesale wastewater bioresources</b>	7%	7%	6%	6%	5%	5%	5%	5%	5%	5%	5%	5%	5%
<b>wholesale wastewater network plus</b>	41%	41%	38%	37%	34%	34%	30%	30%	30%	30%	30%	30%	30%
<b>non appointed</b>	1%	1%	1%	1%	1%	1%	3%	3%	3%	3%	3%	3%	3%

Lines 16

There are no costs attributable to the wholesale dummy control.

Lines 17 and 18

The proportion of the wholesale charge capitalised relates to pension costs capitalised as part of capitalised staff costs.

This has been derived by taking the average capitalised salaries as shown in the regulatory accounts. For 2019 onwards have assumed the same rate as for 2018. This is the same method as used for lines 8 and 9 as explained above

Block C – Cash contributions (DB schemes, ongoing) - actual and forecast

Lines 19-24

This block reports the cash contributions for defined benefits scheme split between services for 2019 onwards. The forecast has been provided by QA and is based on only 18 employees.

The splits uses the same as 2018 as it is assumed that these employees will not change roles.

		2019	2020	2021	2022	2023	2024	2025
<b>Defined benefit cash contributions</b>	£m	0.2	0.2	0.3	0.3	0.3	0.3	0.3

Defined Benefit cash contribution split	2019	2020	2021	2022	2023	2024	2025
<b>residential retail</b>	16%	16%	16%	16%	16%	16%	16%
<b>business retail</b>	2%	2%	2%	2%	2%	2%	2%
<b>wholesale water resources</b>	12%	12%	12%	12%	12%	12%	12%
<b>wholesale water network plus</b>	49%	49%	49%	49%	49%	49%	49%
<b>wholesale wastewater bioresources</b>	4%	4%	4%	4%	4%	4%	4%
<b>wholesale wastewater network plus</b>	18%	18%	18%	18%	18%	18%	18%

Lines 25

There are no costs attributable to the wholesale dummy control.

Lines 26

This is a calculated cell and adds up lines 19 to 25

Block D – Cash contributions (DB schemes, deficit recovery) - actual and forecast

Lines 27-32

This block reports the deficit repair costs for the Defined Benefits scheme split between services for 2019 onwards.

In July 2016 the Directors of Welsh Water Pension Trustee Limited prepared a schedule of contributions to satisfy the requirements of section 227 of the Pensions Act 2004. This was prepared alongside the scheme actuary and was agreed with the Company.

The schedule of payments was effective from the date that it was certified by the Scheme’s actuary and covers the period to 30 April 2030.

In respect of the shortfall in funding the Company agreed to pay:

- £6.67m from 1 Sept 2016 to 31 March 2017
- £6.67m from 1 April 2017 to 31 March 2018
- £6.66m from 1 April 2018 to 31 March 2019, and
- £3.45m from 1 April 2019 to 30 April 2030

	2019	2020	2021	2022	2023	2024	2025
	Outturn						
<b>Cash contribution</b>	6.660	3.450	3.450	3.450	3.450	3.450	3.450
	Outturn		2017-18 FYA (CPIH deflated) (£m)				
<b>Cash contribution per App22</b>	6.660	3.450	3.223	3.159	3.098	3.037	2.976

The split between services is based on scheme members. Where employees have left the company we have used their final role to determine how the contributions should be split. For others, the split used is based on the position they were in when the scheme closed. To determine the splits we have used the roles where the employees were working and the amount of contribution that they had in the scheme.

Based on the above the splits from 2019 onwards is shown as follows:

<b>Defined Benefit repair deficit cash contribution split</b>	<b>2019</b>
<b>residential retail</b>	9%
<b>business retail</b>	1%
<b>wholesale water resources</b>	3%
<b>wholesale water network plus</b>	49%
<b>wholesale wastewater bioresources</b>	6%
<b>wholesale wastewater network plus</b>	32%

Lines 33

There are no costs attributable to the wholesale dummy control.

Lines 34

This is a calculated cell and adds up lines 27 to 33.

## App 23 - Inflation Measures

### Block A - Retail Price Index

#### Line 1 RPI: months of actual data for financial year

*Pre-populated data in green cells are published values for the retail price index (RPI) available on the ONS website. For 2017-18 onwards in lines 2 to 13, companies should enter forecast RPI values for each month. Line 1 will update automatically and should equal 12 to indicate that forecasts have been completed for all months of the financial year.*

Reports the number of months of published RPI data used in populating lines 2 to 13 for each year. For the financial years 2011-12 to 2017-18 inclusive a full year of published data is reported. For 2018-19, four months' published data is reported (April, May, June and July) and the remaining months are forecasts.

#### Line 2 to 13 Retail Price Index by month

*Pre-populated data in green cells are published values for the retail price index (RPI) available on the ONS website. For 2017-18 onwards in lines 2 to 13, companies should enter forecast RPI values for each month. Line 1 will update automatically and should equal 12 to indicate that forecasts have been completed for all months of the financial year.*

Reports the actual and forecast RPI index figures for each month of the financial years 2011-12 to 2029-30 inclusive.

We have used published information from April 2011 to July 2018 inclusive, and forecast data thereafter up to and including March 2030. The forecast year-on-year increases in each year to 2030 are as follows:

	<b>2018-19</b>	<b>2019-20</b>	<b>2021-22 onwards</b>
<b>RPI increase</b>	3.5%	3.0%	3.0%

The forecast indices are included in the table to more decimal places than described in column F. This needed to ensure that when used in the financial model and when calculating the year on year change the effect is consistent with how the plan has been put together where a fixed year on year % change was used rather than an index to 1 decimal place.

### Block B Consumer price index (including housing costs)

#### Lines 14 CPIH: months of actual data for financial year

*Pre-populated data in green cells are published values for the consumer price index including housing costs (CPIH) available on the ONS website. For 2017-18 onwards in lines 15 to 26, companies should enter forecast CPIH values for each month. Line 14 will update automatically and should equal 12 to indicate that forecasts have been completed for all months of the financial year.*

Reports the number of months of published CPIH data used in populating lines 16 to 27 for each year. For the financial years 2011-12 to 2017-18 inclusive a full year of published data is reported. For 2018-19, four months' published data is reported (April, May, June and July) and the remaining months are forecasts.

#### Lines 15 to 26 Consumer Price Index (with housing) my month

*Pre-populated data in green cells are published values for the consumer price index including housing costs (CPIH) available on the ONS website. For 2017-18 onwards in lines 15 to 26, companies should enter forecast CPIH values for each month. Line 14 will update automatically and should equal 12 to indicate that forecasts have been completed for all months of the financial year.*

Report the actual and forecast CPIH index figures for each month of the financial years 2011-12 to 2029-30 inclusive.

We have used published information from April 2011 to July 2018 inclusive, and forecast data thereafter up to and including March 2030. The forecast year-on-year increases in each year to 2030 are as follows:

	<b>2018-19</b>	<b>2019-20</b>	<b>2021-22 onwards</b>
<b>CPIH increase</b>	2.6%	2.3%	2.0%

The forecast indices are included in the table to more decimal places than described in column F. This needed to ensure that when used in the financial model and when calculating the year on year change the effect is consistent with how the plan has been put together where a fixed year on year % change was used rather than an index to 1 decimal place.

**Block C –Line 27 Indexation rate for index-linked debt percentage increase**

*The percentage uplift of index-linked debt by indexation. The financial model works on year average prices, so a year average inflation rate for index linked debt is more appropriate.*

Reports the inflation rate used to calculate the indexation of index-linked debt in each of the financial years from 2018-19 to 2029-30 inclusive. All our index linked debt is linked to RPI. The rates used are the forecast year-on-year RPI percentages applying to the relevant month in each year of the period; since the forecasts project a uniform year-on-year RPI in each month of any given year, these values are the same as those reported in Line 31.

**Block D Financial year average indices**

**Line 28 PRI: financial year average indices**

*The financial year average indices calculated by taking an average over 12 months from April to March.*

This calculated line reports the actual and forecast average annual RPI index for each of the years from 2011-12 to 2029-30 inclusive, calculated as the average of lines 2 to 13 with full precision and reported to one decimal place.

**Line 29 CPIH: financial year average indices**

*The financial year average indices calculated by taking an average over 12 months from April to March.*

This calculated line reports the actual and forecast average annual CPIH index for each of the years from 2011-12 to 2029-30 inclusive, calculated as the average of lines 15 to 26 with full precision and reported to one decimal place.

**Block E Year on year % change**

*Lines 30-35 the year on year % change in the indices.*

*Line 36 The annual % change in RPI average minus the annual change in CPI(H) average.*

Lines 30-36 are calculated cells.

**Block F Long term inflation rates**

*Line 37 The Company's view of the long term inflation rate for RPI. Long term inflation rate is the rate used to discount the nominal WACC into a real WACC.*

Our long term view for the rate of RPI is 3%.

*Line 38 The company's view of the long term inflation rate for CPI(H). Long term inflation rate is the rate used to discount the nominal WACC into a real WACC.*

Our long term view for the rate of CPIH is 2%.

## App24 - Input proportions

### General comments – Wholesale

The table below shows the consolidated forecast input proportions for the wholesale business, including both capital investment and operating expenditure. We have included all costs in our analysis of input proportions and this has been reconciled to WS1 and WWS1.

<b>Wholesale Totex Input Proportions</b>					
<b>Cost Category</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>
Labour	48.70%	47.88%	47.81%	47.54%	47.46%
Energy	5.30%	6.07%	5.93%	6.05%	5.89%
Chemicals	1.15%	1.23%	1.22%	1.27%	1.34%
Materials, Plant and Equipment	29.13%	27.46%	27.60%	27.20%	26.85%
Other	15.72%	17.36%	17.44%	17.94%	18.46%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

The table below shows the £'m values for the input proportions above.

<b>Wholesale Totex £'m</b>					
<b>Cost Category</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>	<b>2024-25</b>
Labour	334	303	303	290	284
Energy	36	38	38	37	35
Chemicals	8	8	8	8	8
Materials, Plant and Equipment	200	174	175	166	161
Other	108	110	111	109	111
<b>Wholesale Total</b>	<b>685</b>	<b>633</b>	<b>634</b>	<b>609</b>	<b>599</b>

The table below shows how the input proportions discussed in the commentary below have been derived for the wholesale business and the contributions to each cost category from operating costs and capital investment. The figures in the table below represent the average costs and proportion percentages for AMP 7.

<b>Operating cost and capital investment elements of App24 input proportions (AMP average)</b>						
<b>Cost Category</b>	<b>Opex £'m</b>	<b>Capex £'m</b>	<b>Total £'m</b>	<b>Opex %</b>	<b>Capex %</b>	<b>Total %</b>
Labour	68	235	303	30%	58%	48%
Energy	37	0	37	16%	0%	6%
Chemicals	8	0	8	3%	0%	1%
Materials, Plant and Equipment	6	169	175	3%	42%	28%
Other	109	1	110	48%	0%	17%
<b>Total</b>	<b>228</b>	<b>404</b>	<b>632</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

The methodology for compiling the table is discussed in the sections below.

### Wholesale General Trends

- Labour costs show a gradually reducing trend over the AMP when viewed as a proportion of total costs. In 'pounds millions' terms labour reduces from £334m to £284m, which is in part due to our cost efficiency programme but in part due to the impact of our Llanelli Gowerton

capital scheme (discussed below). Wholesale totex reduces from £685m to £599m which is why labour as a proportion of total costs does not move significantly. Labour comprises both capital and operating costs. The 0.9% reduction in labour cost proportions between 2020-21 and 2021-22 is caused by the capital element of labour relating to the 'Llanelli Gowerton scheme' which is a £70m programme recognised in 2020-21. The Llanelli Gowerton scheme impacts significantly on labour and materials, plant and equipment cost categories as significant increases in these categories (whilst other cost categories remain relatively static) has the impact of increasing the proportion of cost relating to labour (and materials) in that year and decreasing the proportions in other categories. Further details can be found in the supporting document 5.80 PR19 IC: Llanelli & Gowerton.

- Energy costs reflect power costs, network costs, energy income (from energy exports and green energy subsidies) and the impact of energy derivatives. All energy costs are treated as operating costs. Energy costs are one of the more volatile forecast cost categories which reflects the volatile nature of energy price inflation and the impact of energy derivatives (which we seek to limit through the implementation of a number of efficiency schemes). Whilst energy inflation is on average 4.5% per annum (real price effect on average of 2.5% per annum), our forecasts range from 0.1% inflation (negative RPE) to 6.5% (4.5% RPE) during the AMP. Furthermore, we have energy derivatives in place for the first two years of the AMP, which contribute £1.7m of derivative income in 2020-21 and £0.3m in 21/22 (nothing thereafter).
- Chemical costs are treated as operating costs and in 'pounds millions' terms are effectively static through the AMP. This reflects the impact of our usage efficiency programme relating to chemical which offsets price inflation which on average is forecast at 2.8% per annum (0.8% RPE). The increase in chemical costs as a proportion of total costs reflects larger cost reductions in other cost categories.
- Materials, Plant and Other Equipment input proportions reflects both operating and capital costs. The proportion of costs is relatively stable after year one of the AMP, reducing marginally over the AMP. The higher proportion in year one reflects the impact of the Llanelli Gowerton scheme discussed above. In 'pounds millions' terms materials, plant and equipment costs reduce from £200m to £161m over the course of the AMP, reflecting the 'year one' impact of the Llanelli Gowerton scheme and the impact of the cost efficiency programme.
- Other costs are largely (greater than 99%) operating costs, with a small residual element of capital costs. In 'pounds millions' terms, other costs are relatively stable (particularly considering the number of discrete cost categories included here) increasing from £108m to £110.5m over the course of the AMP. The material elements of this are price inflation on business rates and abstraction charges, largely offset by the impact of our cost efficiency programme. As a proportion of total costs, other costs are lowest in year one, which reflects the impact of the Llanelli Gowerton scheme discussed above. In year's two to five, the proportion of other costs increases from 17.4% to 18.5%. This reflects the modest increase in costs described above, combined with the impact of other areas reducing in cost (notably Labour and Materials, Plant and Other Equipment).

The detailed commentary below, makes many references to our cost efficiency programme. Details of this programme can be found in the supporting document '3.6 PR19 Costs: Efficiency, benchmarking and recovery'

#### Block A

The section below outlines the costs included in each forecast cost category

- Labour: This includes total payroll costs and includes costs of salary, overtime, standby and callout, National Insurance, pensions, expenses and agency for the relevant price control. Where these can be directly allocated to the price control they have been attributed on that basis.

Where costs cannot be directly allocated we have used Head of Department judgement in conjunction with the guidance in the Regulatory Accounting Guidelines. Labour includes costs derived from both operating cost forecasts and a proportion of the capital programme.

- Energy: This includes imported electricity, gas and other fuel costs, energy derivative benefits and costs, carbon reduction commitment liabilities, income from energy sales (export) and green energy subsidies. Energy income is treated as negative operating cost. Where these can be directly allocated to the price control they have been attributed on that basis. Where costs cannot be directly allocated we have used Head of Department judgement in conjunction with the guidance in the Regulatory Accounting Guidelines.
- Chemicals: This includes process chemicals used at the treatment works and pumping stations. Where these can be directly allocated to the price control they have been attributed on that basis. Where costs cannot be directly allocated we have used Head of Department judgement in conjunction with the guidance in the Regulatory Accounting Guidelines.
- Materials, Plant and Equipment: This includes mechanical and electrical materials, general tools and equipment, pipes and fittings and pump spares etc. These costs are derived from both operating cost forecasts and a proportion of the capital programme. Where these can be directly allocated to the price control they have been attributed on that basis. Where costs cannot be directly allocated we have used Head of Department judgement in conjunction with the guidance in the Regulatory Accounting Guidelines.
- Other: This includes all other areas of operating costs and a small (less than 0.5%) of capital spend which is not included in the specific cost categories above. The operating costs include areas of contractor spend (sewerage blockage clearance, leakage detection, grounds maintenance, skip hire etc.) along with transport costs, local authority and cumulo rates, abstraction charges, discharge consents and IT costs. Where these can be directly allocated to the price control they have been attributed on that basis. Where costs cannot be directly allocated we have used Head of Department judgement in conjunction with the guidance in the Regulatory Accounting Guidelines.

#### Treatment of Capital

Capital costs have been included in the relevant specific cost category (mostly labour, plant, materials and equipment) based on an analysis of historic spend in our unit cost database, a database that allows us to analyse the specific cost elements of both routine (maintenance) and bespoke (enhancement/other capital) investments with a high degree of granularity. Whilst the enhancement or other investment spend is less uniform and may have slightly different proportions as the mix of business changes, we believe that by using aggregate input proportions which reflect the mix of work over many years, we capture a fair reflection on the input proportions for all parts of the capital programme.

We have performed a separate analysis of capital spend proportions between the four wholesale price controls and for infrastructure and non-infrastructure spend. The consolidated impact of this is shown in the table below. These are the input proportions we have used for the capital programme for AMP 7.

<b>Infrastructure and Non Infrastructure Capital Spend Input Proportions</b>				
	<b>Water Resources % proportions</b>	<b>Water Network Plus % proportions</b>	<b>Waste Water Network Plus % proportions</b>	<b>Waste Water Bioresources % proportions</b>
Labour	57.37%	59.89%	55.85%	58.44%
Energy	0.00%	0.00%	0.00%	0.00%
Chemicals	0.00%	0.00%	0.00%	0.00%
Materials, plant and equipment	42.38%	39.95%	43.90%	41.54%
Other	0.25%	0.16%	0.25%	0.02%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

#### Preparation of operating cost forecasts

The section below outlines how operating cost forecasts have been prepared for the submission.

- Actual costs for 2017-18 are shown on a consistent basis with the Annual Performance Report, apart from adjusting 'Other operating expenditure' to reflect the 'Principle Use' treatment as described in the latest Ofwat guidance.
- 2018-19 – 2024-25 costs have been allocated directly where possible and in all other cases using an appropriate cost driver.
- Our efficiency programme has been built 'bottom up' and therefore efficiencies have been allocated to the cost categories to which they relate.
- Confirmation of the treatment for all years has been agreed with each Head of Department.

#### Preparation of capital expenditure specific treatment

The section below outlines how capital expenditure forecasts have been prepared for the submission.

- The forecasts are built upon capital programmes by 'investment case' which reflect the capital investment work streams through which we manage and improve our business. These investment cases are mapped to price controls.
- In the remainder of AMP 6, capital is forecast using treatment consistent with the 2017-18 APR. Differences in specific cost lines are a consequence of the adoption of the 'Principle Use' accounting treatment as required by Ofwat in the PR19 Methodology.
- For AMP 7, reductions in the maintenance capital programme reflect the impact of the planned efficiency programme, but also changes in the mix of the capital programme (for example there will be different maintenance 'campaigns' in AMP 6 to AMP 7, for items which need periodic maintenance over the medium term, but not necessarily every AMP).
- The capital programme related to 'Other Capital Expenditure' is by its nature more volatile which reflects specific investment case completions that are not then repeated in future years. This will also reflect new investment case capital strategies that will impact upon the same and/or different process controls, depending on the investment case.

#### Retail – General Trends

The table below shows how the input proportions discussed in the commentary below have been derived for the retail business and the contributions to each cost category from operating costs and capital investment. The figures in the table below represent the average costs and proportion percentages for AMP 7.

<b>Operating cost and capital investment elements of App24 input proportions (AMP average)</b>						
<b>Cost Category</b>	<b>Opex £'m</b>	<b>Capex £'m</b>	<b>Total £'m</b>	<b>Opex %</b>	<b>Capex %</b>	<b>Total %</b>
Labour	17	5	22	30%	64%	35%
Bad Debt	18	0	18	32%	0%	28%
Postage	1	0	1	2%	0%	2%
Other	20	3	22	35%	36%	35%
<b>Total</b>	<b>56</b>	<b>8</b>	<b>64</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Forecast expenditure derives direct costs from customer led models, which forecast the activity and expenditure associated with each of the key elements of the Retail business. Five customer led models are used for forecasting, where each model focuses on a key aspect of the retail operation, as described below.

- Doubtful debt
- Customer Services (including BCC, OCC, correspondence, billing, planning, payments, BPO and other costs)
- Debt Management (including commercial collections activity, debt investigation activity, debt collection agency costs and other costs)
- Metering (including meter readers, their equipment & vehicles, billing operations support and other costs)
- Other (remaining costs not modelled in the above, such as annual billing costs, establishment costs and general management costs)

The costs associated with each key element of the above retail models have then been attributed to one of the 5 key expenditure groups below;

- Manpower/labour
- Postage
- Transport
- IT
- Other

Once assigned to one of the above expenditure groups, a proportion of the direct cost of each activity has then been allocated to residential (household) or business (non-household) customer groups. The manner in which costs are allocated is dependent upon the type of activity. This is detailed below.

#### Doubtful Debt

- The cost of residential and business bad debt are modelled separately. The impact of social tariff benefits, and the potential to disconnect businesses are considered in this approach.

#### Metering

- Metering costs are allocated based upon customer numbers and the volume of meter visits required to service each group. For PR19 the costs of core meter reading activities including Meter Readers, Meter Reader equipment, Billing Operations Support and Meter Contract Agents are modelled based upon the number of meter visits required to service each customer type.
- Costs are allocated as an average cost per meter visit, where the number of meter visits per customer type is forecasted using customer numbers and the anticipated read frequency of these customers (6 monthly, quarterly, telemetry)
- The split between residential and business customers is established by allocating costs according to the anticipated volume of visits per customer type, this approach is favoured as the frequency

of meter reading varies between residential and businesses, and as such the split in customer numbers (Residential: 93% in 2018-19) is not reflective of the split in meter visits (Residential: 84% in 2018-19). This approach allows for a more specific allocation of the cost of read meters.

#### Customer Services

- In 2016-17 and 2017-18 the basis for allocation between residential and business was the customer volumes of each category described in RAG 2.07 which provided an accurate apportionment between residential and business. This treatment is in line with the previous years and resulted in a customer service allocation of (Residential 85%: Business 15%).
- The methodology for previous years remains in place for the remainder of AMP6 and duration of AMP7 as the data required to split these areas continues to be readily available. The resulting allocation to business is 9% for the next year, falling steadily across the next AMP to 6% in 2025.
- Costs associated with the Customer Services Affordability team are allocated wholly to residential, as this activity related purely to work supporting residential customers
- The customer service model calculates the volume of residential and business bills separately, using customer numbers and billing frequency to inform forecasting. The costs of bills are therefore allocated based on the forecasted volume of bills attributable to each of the two customer types rather than use the allocation proportions approach detailed above.

#### Debt Management

- RAG 2.07 dictates that the split between residential and business should be based upon the customer type of debt outstanding for more than 30 days. In 2016-17 the basis for allocation between residential and business was the customer specific aged debt profile which provided an accurate apportionment between residential and business. This treatment is in line with the previous years and resulted in a debt management allocation of (residential 92%: business 8%).
- In 2017-18 we have used more granular data to allocate specific activities to each customer type, for instance commercial collections are allocated 100% to business, while affordability activities and third party commissions are allocated 100% to residential.
- This results in an allocation of (residential 86%: business 14%).
- The methodology for 2017-18 was used for the remainder of AMP6 and duration of AMP7. The resulting allocation to business is 5% for the next year rising to 6% for the last year of AMP6 and first two years of AMP7, increasing to 7% for the last 3 years of AMP7.

#### Other

- Costs are allocated to each customer type based on customer numbers, with the exception of field ops and services to developers, which are allocated wholly to business.

The approach above is consistent with the methodology applied to Retail tables R1 (Residential Retail) and R4 (Business Retail).

#### General notes

The values presented in this table represent the proportion of the total cost that is attributable to each cost category.

Void management costs are split across residential/business using the approach detailed in Debt Management above.

#### Block A Wholesale water - water resources Lines 1 – 6

In broad terms, input proportions for water resources are nearly half labour costs, one quarter materials plant and equipment and one quarter 'other' costs. A line by line analysis is detailed below.

#### Line 1 Labour

*Please enter the company forecast proportions of expenditures on general labour.*

This value represents the proportion of total wholesale water resources costs relating to general labour. Labour input proportions reflect both operating costs and capital labour costs. Labour shows a decreasing trend as a proportion of total costs, decreasing from 46% to 43.8% over the course of AMP 7 (£25.4m to £23.7m in 'pounds millions' terms). £1m of the reduction is a consequence of our operating cost efficiency programme. The remainder of the reduction (£0.7m) and the minor increase in the proportion of labour costs in 2021-22 relate to movements in the capital programme. The reduction in labour attributable to the capital programme reflects both the cost efficiency programme referred to above and the fact that capital spend in water resources increases from £28m to £44m (including the value of the programme subsequently re categorised as IRE) between 2020-21 and 2021-22 and then reduces from a peak of £44m in 2021-22 to £27m (including the value of the programme subsequently re categorised as IRE) in 2024-25. The labour element of the water resources capital programme (infra and non-infra combined) is 57% and therefore 57% of the movement on capital is reflected in the labour cost line. As the capital programme increases and then decreases, so does the labour cost element relating to that capital programme. Over the course of the AMP, the capital programme reduces by £1.1m.

#### Line 2 Energy

*Please enter the company forecast proportions of expenditures on energy.*

This value represents the proportion of total wholesale water resources costs relating to Energy, which reflects the energy cost net of energy income for the price control. Energy costs are treated as operating expenditure and are quite volatile through the AMP, comprising -1.3% of total costs in 2020-21, 1% of costs in 2020-21, 2% of costs in 2022-23, 3% of costs in 2023-24 and -2% costs in 2024-25. The negative value in 2020-21 reflects positive net derivative income, resulting from our near-term hedging of energy costs. This reduces by £1.4m from 2020-21 to 2021-22, impacting upon energy costs in water resources in that year. For the remainder of the AMP we currently have no derivatives in place, which means we have no derivative income benefit (or cost) in the remaining years. Compared to the significant derivative income attributable to water resources in 2020-21, the following four years therefore show a higher proportion of costs relating to energy relative to the benefit shown in year one (and to a lesser extent year 2). The significant impact in 2024-25 relates to hydro income, which increases by £2m (one of our key cost efficiency schemes in water resources). These efficiencies are offset by a real price effect of 2.5% per annum.

#### Line 3 Chemicals

*Please enter the company forecast proportions of expenditures on chemicals.*

This value represents the proportion of total wholesale water resources costs relating to Chemicals. Chemical costs are treated as operating expenditure and are relatively stable in 'pounds millions' terms at £1m per annum. Forecast average inflation of 2.8% (0.8% RPE) is largely offset by our operating efficiency programme. The (relatively minor) volatility evident when viewing chemicals as a proportion of total costs, which move from 1.8% (year 1) to 1.4% (years 2-3) and then up to 2% by year 5, is due to changes in other specific cost lines rather than chemicals (most notably the decreases in labour and energy).

#### Line 4 Materials, Plant and Equipment

*Please enter the company forecast proportions of expenditures on materials, plant and equipment.*

This value represents the proportion of total wholesale water resources costs relating to Materials, Plant and Equipment. Materials, Plant and Equipment costs are quite volatile as a proportion of total costs, increasing from 24% to 27% from 2020-21 to 2021-22, before gradually reducing over the remainder of the AMP to 23.2%. In 'pounds millions' terms, this represents a £7m increase between years one and two of the AMP (from £13m to £20m), before gradually reducing back to £13m, in line

with the costs at the start of the AMP. Materials, Plant and Equipment comprise over 90% capital costs and less than 10% operating costs. Operating costs are largely stable at £1m and the volatility therefore results from the movement in the water resource capital programme which increases from £28m to £44m (including the value of the programme subsequently re categorised as IRE) between 2020-21 and 2021-22 and then reduces from a peak of £44m in 2021-22 to £27m (including IRE) in 2024-25. The Plant, Materials and Equipment element of the water resources capital programme (infrastructure and non-infrastructure combined) is 43% and therefore 43% of the movement on capital is reflected in the Materials, Plant and Equipment cost line. As the capital programme increases and then decreases, so does the plant materials and equipment proportion of that cost line.

#### Line 5 Other costs

*Please enter the company forecast proportions of expenditures on other input costs.*

This value represents the proportion of total wholesale water resources costs not discussed separately above. Key elements of this cost include, cumulo rates, abstraction charges, transport costs, subcontracted costs (such as maintenance) and IT costs. The costs are nearly all (greater than 99%) operating costs rather than capital. Costs are relatively stable through the AMP in 'pounds millions' terms, apart from a £1m increase in 2022-23, which is then maintained through the rest of the AMP, which relates to increases in Environmental Agency charges. As a proportion of total costs, other costs decrease from 30% to 23% between 2020-21 and 2021-22, which reflects increases in energy and materials costs lines discussed above, which reduces the proportion of costs relating to other costs (other costs are static in absolute terms between 2020-21 and 2021-22). In years three to five of the AMP, other costs increase as a proportion of total costs, from 23% to 33%. This is in part due to the cost increase discussed above, but also due to reductions in other specific cost lines rather than chemicals (most notably the decreases in labour and Energy).

#### Line 6 Total proportion ~ water resources

*Please enter the company forecast proportions of expenditures for each control.*

This is a calculated cell. Details of the movements in the capital programme can be found in the commentary for WS1.

#### Block B Wholesale water – network plus. Lines 7 - 12

In broad terms, input proportions for water network plus comprises just over half labour costs, one quarter materials plant and equipment and one quarter energy costs and 'other' costs. A line by line analysis is detailed below.

#### Line 7 Labour

*Please enter the company forecast proportions of expenditures on general labour.*

This value represents the proportion of total wholesale water network plus costs relating to general labour. Labour input proportions reflect both operating costs and capital labour costs. Labour is relatively stable as a proportion of total costs between 2020-21 and 2024-25 at approximately 51%, but reduces in 'pounds millions' terms from £140m to £134m during the course of the AMP. Labour comprises (approximately) 20% labour from operating costs and 80% labour from the capital programme. The reduction in labour cost is attributable to the capital programme and reflects the impact of both our cost efficiency programme and the fact that capital spend in water network plus reduces from £182m to £174m (including the value of the programme subsequently re categorised as IRE) over the AMP. The labour element of the water network plus capital programme (infra and non-infra combined) is 60% and therefore 60% of the movement on capital is reflected in the labour cost line. As the capital programme in water network plus reduces in value, this reduces labour costs.

#### Line 8 Energy

*Please enter the company forecast proportions of expenditures on energy.*

This value represents the proportion of total wholesale water network plus costs relating to Energy which reflects the energy cost net of energy income for the price control. Energy costs are treated as operating expenditure and are relatively stable as a proportion of total costs, increasing by 1% (from 6.3% to 7.3% of total costs) over the course of the AMP. In 'pounds millions' terms, costs are more volatile. There are benefits relating to our energy efficiency programme, but these are more than offset by inflation ranging from 5% (2020-21), 0.1% (2022-23) and back to an average of 5.75% over the last two years of the AMP. The average inflation on energy is forecast to be 4.5% per annum (2.5% RPE).

#### Line 9 Chemicals

*Please enter the company forecast proportions of expenditures on chemicals.*

This value represents the proportion of total wholesale water network plus costs relating to Chemicals. Chemical costs are treated as operating expenditure and are relatively stable in 'pounds millions' terms at £3m per annum. Forecast average inflation of 2.8% (0.8% RPE) is offset by our operating efficiency programme. The increasing proportion of chemicals as a percentage of total costs through the AMP is due to decreases in costs in other cost lines (labour and 'other costs').

#### Line 10 Materials, Plant and Equipment

*Please enter the company forecast proportions of expenditures on materials, plant and equipment.*

This value represents the proportion of total wholesale water network plus costs relating to Materials, Plant and Equipment. Materials, Plant and Equipment input proportions reflect both operating costs and capital labour costs. Materials, plant and Equipment costs are quite stable as a proportion of total costs, at approximately 28% of total costs through the AMP. In 'pounds millions' terms, cost decrease from £76m to £73m over the AMP. Materials, Plant and Equipment comprise approximately 95% capital costs and 5% operating costs. Operating costs are largely stable over the AMP. 40% of costs in the water network plus capital programme are allocated to Materials, Plant and Equipment and therefore the movement in the capital programme has a significant impact on this cost line. As the capital programme decreases from £182m to £173m (including the value of the programme subsequently re categorised as IRE) Materials, plant and equipment costs mirror this trend. The relative stability in the proportion of costs relating to Materials, Plant and Equipment is due to parallel movements in other specific cost lines also impacted by the movement in the capital programme, most notably labour.

#### Line 11 Other costs

*Please enter the company forecast proportions of expenditures on other input costs.*

This value represents the proportion of total wholesale water network plus costs not discussed separately above. Key elements of this cost include, cumulo rates, transport costs, subcontracted costs such as leakage detection and repair and IT costs. The costs are nearly all (greater than 99%) operating costs rather than capital. Costs reduce during the AMP from £37m to £30m, which impacts upon the proportion of other costs as a percentage of total costs (the proportion of other costs reduces from 13.5% to 11.5%). This reduction relates to the Network Alliance cost efficiency programme, which is a project to combine the low risk, repeatable elements of the reactive leakage repair programme with some planned capital work (allowing the contractor to 'smooth' peaks and troughs in work). This cost efficiency programme is the biggest single initiative in AMP 7 and impacts on the water network plus price control.

#### Line 12 Total proportion ~ water network plus

*Please enter the company forecast proportions of expenditures for each control.*

This is a calculated cell. Details of the movements in the capital programme can be found in the commentary for WS1.

#### Blocks C Wholesale wastewater – network plus Lines 13 - 18

In broad terms, input proportions for waste water network plus are nearly half labour costs, one quarter materials plant and equipment and one quarter energy costs and 'other' costs. A line by line analysis is detailed below.

#### Line 13 Labour

*Please enter the company forecast proportions of expenditures on general labour.*

This value represents the proportion of total wholesale waste water network plus relating to general labour. Labour input proportions reflect both operating costs and capital labour costs. The capital programme contributes over 80% to labour costs upon which these proportions are based.

Operating cost labour is stable throughout the AMP and the fluctuations therefore relate to fluctuations in the capital programme (the labour element of the capital programme is forecast at 57% of total capital costs). Labour is relatively stable as a proportion of total costs during the AMP apart from the first year (2020-21). In 2020-21 labour is 47% of total costs which reflects the labour element of the 'Llanelli Gowerton Capital Scheme', the capital scheme discussed in the general comments above. From 2021-22 to 2024-25 labour is stable at 44% of total costs. The minor fluctuations in these years reflect minor fluctuations in the capital programme.

#### Line 14 Energy

*Please enter the company forecast proportions of expenditures on energy.*

This value represents the proportion of total wholesale wastewater network plus costs relating to Energy which reflects the energy cost net of energy income for the price control. Energy costs are treated as operating expenditure and are quite volatile as a proportion of total costs at the start of the AMP, varying from 7.4% in 2020-21 to 9.2% in 2021-22 and then falling back to a more stable 8.5% of total costs in the remainder of the AMP. The early volatility is a consequence of the Llanelli Gowerton scheme impact on cost proportions in 2020-21, which is an additional £73m (of totex of £330m) impacting on labour and materials, plant and equipment (higher costs relating to labour, plant and materials reduces the proportion of total costs relating to energy, which is not impacted in cost terms from the Llanelli Gowerton scheme). Over the course of the AMP, energy costs reduce from £24.5m to £22.6m, reflecting the impact of our energy efficiency operating cost reduction programme. This more than offsets the impact of high inflation. Our energy efficiency schemes have a significant impact on waste water treatment works energy costs, which are included in this price control.

#### Line 15 Chemicals

*Please enter the company forecast proportions of expenditures on chemicals.*

This value represents the proportion of total wholesale wastewater network plus costs relating to chemicals. Chemical costs are treated as operating expenditure and are relatively stable in 'pounds millions' terms at £3m per annum, although there is a small reduction in costs through the AMP. Forecast average inflation of 2.8% (0.8% RPE) is offset by our operating efficiency programme. The relatively small increasing proportion of chemicals as a percentage of total costs from 2020-21 to 2021-22 is caused by the Llanelli Gowerton capital project in 2020-21, which comprises £73m of totex of £330m and impacts significantly on the cost proportion calculation (higher costs relating to labour, plant and materials resulting from the Llanelli Gowerton scheme reduces the proportion of total costs relating to chemicals, which is not impacted in cost terms from the Llanelli Gowerton scheme).

#### Line 16 Materials, Plant and Equipment

*Please enter the company forecast proportions of expenditures on materials, plant and equipment.*

This value represents the proportion of total wholesale wastewater network plus costs relating to Materials, Plant and Equipment. Materials, Plant and Equipment input proportions reflect both operating costs and capital labour cost (although over 99% relate to capital costs). 43% of costs in the wastewater network plus capital programme are allocated to Materials, Plant and Equipment and therefore the movement in the capital programme has a significant impact on this cost line. Materials, plant and equipment costs are quite stable as a proportion of total costs after the first year of the AMP (between 27% and 28% of total costs). In 2020-21 materials plant and equipment costs are impacted by the 'Llanelli Gowerton scheme', a £73m capital programme, which increases the proportion of costs relating to materials, plant and equipment to 32%. In 'pounds millions' terms, costs decrease from £105m to £73m between 2020-21 and 2021-22 reflecting the impact of the Llanelli Gowerton scheme. In the remainder of the AMP, minor movement reflect movements in the capital programme (the operating cost element of materials plant and equipment costs remains static through the AMP).

#### Line 17 Other costs

*Please enter the company forecast proportions of expenditures on other input costs.*

This value represents the proportion of total wholesale wastewater network plus costs not discussed separately above. Key elements of this cost include, local authority rates, transport costs, tankering, subcontracted costs such as sewerage blockage clearance and IT costs. The costs are nearly all (greater than 99%) operating costs rather than capital. Costs increase from £44m to £48m between 2020-21 and 2021-22 which is a result of the business revaluation process that increases local authority rates costs. Costs gradually increase from £48m to £51m over the remaining three years of the AMP, which is due to the change in Welsh Government legislation relating to local authority rates, which requires businesses to notify rating agencies when enhancement work is completed and will result in higher rates costs. See the commentary relating to WWS 7 for more details. The cost pressures associated with local authority rates increase the proportion of costs relating to other costs from 13% to 19.5% over the course of the AMP. The impact of the Llanelli Gowerton scheme also impact significantly on the year one proportions, which are more stable from year two of the amp onwards.

#### Line 18 Total proportion ~ wastewater network plus

*Please enter the company forecast proportions of expenditures for each control.*

This is a calculated cell. Details of the movements in the capital programme can be found in the commentary for WWS1.

#### Blocks D. Wholesale wastewater – bioresources Lines 19 - 24

In broad terms, input proportions for waste water bioresources are more than half labour costs, half 'other costs' with the benefit of energy income offsetting the materials plant and equipment costs. A line by line analysis is detailed below.

#### Line 19 Labour

*Please enter the company forecast proportions of expenditures on general labour.*

This value represents the proportion of total wholesale waste water bioresources costs relating to general labour. Labour input proportions reflect both operating costs and capital labour costs. Labour reduces as a proportion of total costs from 53% in 2020-21 to 51.3% in 2024-25 and from £13.5m to £12.3m in 'pounds millions' terms. This is largely due to reductions in the capital programme over the course of the AMP. The programme reduces from £11m to £9m (including the value of the programme subsequently re categorised as IRE) over the AMP and approximately 58% of the capital programme costs relate to labour. As the capital programme reduces so does the

labour element of the capital programme. The reduction in the capital programme reflects both the cost efficiency programme referred to above and the completion of the planned investment programme towards the end of the AMP. Operating cost labour remains static through the AMP period.

#### Line 20 Energy

*Please enter the company forecast proportions of expenditures on energy.*

This value represents the proportion of total wholesale waste water bio resources costs relating to energy and reflects the net energy for the price control. Energy costs are treated as operating expenditure (or in this case negative operating cost) and increases in value during the AMP. In 'pounds millions' terms energy income grows from £4.5m to £5.2m reflecting increased generation at sludge treatment centres, resulting from new schemes and increased material volumes through the AMP (volumes grown by 6% over the AMP).

#### Line 21 Chemicals

*Please enter the company forecast proportions of expenditures on chemicals.*

This value represents the proportion of total wholesale wastewater bioresources costs relating to chemicals. Chemical costs are treated as operating expenditure and are relatively stable in 'pounds millions' terms at £0.9m per annum. Costs are also stable as a proportion of total costs (there is a small reduction in costs through the AMP). Forecast average inflation of 2.8% (0.8% RPE) is offset by our operating efficiency programme.

#### Line 22 Materials, Plant and Equipment

*Please enter the company forecast proportions of expenditures on materials, plant and equipment.*

This value represents the proportion of total wholesale wastewater bioresources costs relating to Materials, Plant and Equipment. Materials, Plant and Equipment input proportions reflect both operating costs and capital labour costs. Materials, plant and equipment costs gradually reduce over the AMP as a proportion of total costs from 19% to 17.2%. In 'pounds millions' terms this is a £0.8m reduction (from £4.9m to £4.1m). Operating costs comprise less than 10% of total materials, plant and equipment costs and are stable throughout the AMP. The reduction in costs therefore reflects the reduction in the capital programme which reduces from £11m to £9.2m (including the value of the programme subsequently re categorised as IRE) over the AMP. 43% of the capital programme costs relate to materials, plant and equipment and therefore reductions in the capital programme will also reduce the materials, plant and equipment cost line.

#### Line 23 Other costs

*Please enter the company forecast proportions of expenditures on other input costs.*

This value represents the proportion of total wholesale wastewater bioresources costs not discussed separately above. Key elements of this cost include, local authority rates, transport costs, subcontracted costs such as tankering, sludge disposal and IT costs. The costs are nearly all (greater than 99%) operating costs rather than capital. Costs increase from £10.8m to £11.9m during the AMP, which increases the proportion of costs relating to other costs from 42% to 49%. This is as a result of higher costs associated with sludge transport and sludge treatment resulting from Bio solids Assurance Scheme, tighter constraints in the National Environmental Programme and a 6% increase in volumes during the AMP.

#### Line 24 Total proportion ~ bioresources

*Please enter the company forecast proportions of expenditures for each control.*

This is a calculated cell. Details of the movements in the capital programme can be found in the commentary for WWS1.

#### Blocks E Residential Retail Lines 25 - 29

In broad terms, input proportions for residential retail are one third labour costs, one third bad debt costs and one third 'other costs'. A line by line analysis is detailed below.

##### Line 25 Labour

*Please enter the company forecast proportions of expenditures on general labour.*

This value represents the proportion of total residential retail costs relating to general labour. Labour input proportions reflect both operating costs and capital labour costs. This includes direct FTE costs associated with a range of roles including meter readers, contact centre employees and management. Also included within this apportionment are professional membership costs, staff rewards and expenditure related to annual billing. Expenditure attributed to BPO are excluded from this apportionment, with BPO described as outsourced expenditure and represented within "Other" costs. Allocation of costs across residential and business categories are applied as described above. The proportion of costs attributable to labour is forecast to decrease over the period shown as a result of a decrease in the expenditure on labour. This is anticipated as the result of a number of planned capabilities, such as improvements to dialler systems, which are designed to improve the productivity of agents. Costs are also forecast to decrease as customers are encouraged to utilise more modern cost efficient contact channels such as web forms and webchats. Planned implementation of robotics will also result in productivity benefits and reduced costs in some areas.

##### Line 26 Bad Debt

*Please enter the company forecast proportions of expenditures on other input costs.*

This value represents the proportion of total residential retail costs relating to bad debt. The allocation of costs across residential and business categories are applied as described above. The proportion of these costs increase over the AMP because of more aggressive reductions in labour costs than bad debt.

##### Line 27 Postage

*Please enter the company forecast proportions of expenditures on other input costs.*

This value represents the proportion of total residential retail costs relating to postage. This includes postage costs associated with general correspondence letters, affordability letters, debt letters and residential bills. The allocation of costs across residential and business categories are applied as described above. The proportion of costs attributable to postage is forecast to increase slightly over the period shown (0.23%), this is the result of a decrease in other cost categories, and also due to increased expenditure resulting from planned implementation of more frequent contact with high risk vulnerable customers. This includes a planned increase in the bill frequency for some of our most financially vulnerable customers.

##### Line 28 Other

*Please enter the company forecast proportions of expenditures on other input costs.*

This value represents the proportion of total residential retail costs relating to other retail activities. This includes establishment, bought in services, materials, transport, and IT and telecommunication expenditure. Examples of this expenditure includes void management costs, 3rd party commission costs, debt collection agency costs, consultancy costs and other establishment costs including those related to insurance, furniture and stationery. The allocation of costs across residential and business categories are applied as described above. The proportion of costs attributable to other is forecast to increase over the period shown (1.64%), this primarily the result of a decrease in other cost categories.

Line 29 Total proportion ~ residential retail

*Please enter the company forecast proportions of expenditures for each control.*

This is a calculated cell.

Blocks F Business Retail Lines 30 - 34

In broad terms, input proportions for business retail are 40% labour costs, 40% 'other costs' with the remaining 20% being mostly attributable to bad debt costs. A line by line analysis is detailed below.

Line 30 Labour

*Please enter the company forecast proportions of expenditures on general labour.*

This value represents the proportion of total business retail costs relating to general labour. This includes direct FTE costs associated with a range of roles including meter readers, contact centre employees and management. Also included within this apportionment are professional membership costs, staff rewards and expenditure related to annual billing. Allocation of costs across residential and business categories are applied as described above. The proportion of costs attributable to labour is forecast to decrease over the period shown (2.57%), this is as a result of a decrease in the expenditure on labour. This is anticipated as the result of a number of planned capabilities, such as improvements to dialler systems, which are designed to improve the productivity of agents. Costs are also forecast to decrease as customers are encouraged to utilise more modern cost efficient contact channels such as web forms and webchats. Planned implementation of robotics will also result in productivity benefits in some areas.

Line 31 Bad Debt

*Please enter the company forecast proportions of expenditures on other input costs.*

This value represents the proportion of total business retail costs relating to bad debt. The allocation of costs across residential and business categories are applied as described above. The proportion of these costs is forecast to decrease gradually over the period shown, this is the result of an anticipated reduction in the cost of bad debt.

Line 32 Postage

*Please enter the company forecast proportions of expenditures on other input costs.*

This value represents the proportion of total business retail costs relating to postage. This includes postage costs associated with general correspondence letters, debt letters, commercial letters and business bills. The allocation of costs across residential and business categories are applied as described above. The proportion of costs attributable to postage is forecast to increase slightly over the period shown (0.11%), this is the result of a decrease in other cost categories, and also due to increased expenditure resulting from planned implementation of more frequent contact with high risk vulnerable customers. This includes a planned increase in the bill frequency for some of our most financially vulnerable customers.

Line 33 Other

*Please enter the company forecast proportions of expenditures on other input costs.*

This value represents the proportion of total business retail costs relating to other retail activities. This includes establishment, bought in services, materials, transport, and IT and telecommunication expenditure. Examples of this expenditure includes void management costs, debt collection agency costs, consultancy costs and other establishment costs including those related to insurance, furniture and stationery. The allocation of costs across residential and business categories are applied as described above. The proportion of costs attributable to other is forecast to increase over the period shown (4.01%), this primarily the result of a decrease in other cost categories.

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Line 34 Total proportion ~ business retail

*Please enter the company forecast proportions of expenditures for each control.*

This is a calculated cell.

## App24a - Real price effects (RPEs) and efficiency gains

### Overview

At the outset of our PR19 planning process, the Welsh Water Board took a decision that significant cost savings would need to be included in our plans so that even after the effects of real price inflation had been factored in, the investments which are driving improved service for customers is financed from efficiency improvements rather than increases in customer bills.

By starting early on this process, we have been able to identify significant cost saving opportunities across the broad spectrum of our services. When fully delivered as planned, these savings would total around 10% of Totex over the AMP7 period, with an ongoing saving of some 12% a year being achieved in 2024-25. A summary of the efficiencies covering both the operating cost base and capital investment programme is shown in table 1 below.

Table 1

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
	£m	£m	£m	£m	£m	£m
Totex pre efficiency	<b>812</b>	<b>759</b>	<b>767</b>	<b>745</b>	<b>743</b>	<b>3,826</b>
Less: cost saving programmes:						
Wholesale operations	(23)	(25)	(27)	(30)	(36)	(141)
Capital delivery	(19)	(26)	(30)	(30)	(33)	(138)
Support services	(9)	(10)	(12)	(13)	(14)	(58)
Retail operations	(5)	(6)	(7)	(9)	(10)	(37)
Total efficiency savings	<b>(56)</b>	<b>(67)</b>	<b>(76)</b>	<b>(82)</b>	<b>(93)</b>	<b>(374)</b>
Totex post efficiency	<b>756</b>	<b>692</b>	<b>691</b>	<b>663</b>	<b>650</b>	<b>3,452</b>

More detail regarding these savings initiatives can be found in the supporting document 3.6 PR19 Costs: efficiency, benchmarking and recovery. The majority of these savings are delivered in 2020-21 which reflects our ambition to accelerate delivery of these efficiencies, to maximise impact during the next AMP. This drives significant efficiencies into nearly all of the price controls in year one, with further efficiencies delivered in years two to five, albeit at lower levels of incremental efficiency when compared to year one in isolation.

### Wholesale Inflationary Pressures and RPE

The business has also been working hard to understand and mitigate wherever possible inflationary cost pressures that we believe will outstrip CPIH (the real price effect or RPE). A summary of the RPE's we believe will impact on the business is shown in table 2 below, along with the third party source of our inflationary forecasts. Our forecasts predict that 78% of our gross operating cost (before capitalisation) will be subject to RPE's, although these are not linear and we are also forecasting negative RPE (in energy for example) during specific years in the AMP.

*Table 2. Costs subject to specific inflationary pressures*

Cost Category	18/19 £'m	Cost Driver	Inflation Forecast Source
Labour	213	Reduced unemployment	Economic Insight
Energy	43	Wholesale - supply/demand. 3rd party charges - Gov Policy/gen inflation	Cornwall Insight
Chemicals	10	Industry Factors	Economic Insight
Business Rates	7	Government Policy	Lambert Smith Hampton
Cumulo Rates	17	Government Policy	Chandlers
NRW Charges	10	Dam Safety Programme/S20 Agreement	NRW Abstraction charges consultation
<b>Total</b>	<b>300</b>		

In addition a Construction Output Pricing Index (COPPI) forecast, prepared by Mott Macdonald, has been used to assess inflationary pressure relating to the Capex plan.

Table 3 below shows the financial impact of the real price effect exposure in AMP 7. The table reflects gross operating costs and the impact of RPE's on the capital programme net of capitalised salaries (to avoid a double count).

*Table 3. Summary of Inflation Risk*

	18/19 £'m	19/20 £'m	20/21 £'m	21/22 £'m	22/23 £'m	23/24 £'m	24/25 £'m	Amp 7 £'m
Labour inflation risk	-1	-1	-3	-5	-7	-9	-10	-33
Power inflation risk	0	-1	-1	-3	-2	-3	-3	-12
Chemicals inflation risk	0	0	0	0	0	0	0	-2
Business Rates inflation risk	0	0	0	0	0	0	0	-1
Cumulo Rates inflation risk	0	1	0	0	0	0	0	1
NRW Charges inflation risk	0	0	-1	-1	-1	-1	-2	-6
<b>Opex Inflation Risk</b>	<b>0</b>	<b>-2</b>	<b>-5</b>	<b>-8</b>	<b>-10</b>	<b>-13</b>	<b>-17</b>	<b>-52</b>
Capex Inflation Risk	3	2	-5	-10	-12	-12	-11	-50
<b>Total Inflation Risk</b>	<b>3</b>	<b>0</b>	<b>-9</b>	<b>-18</b>	<b>-22</b>	<b>-24</b>	<b>-28</b>	<b>-102</b>

#### Wholesale Operating Cost Real Price Effects (RPE) and Efficiencies

The table below shows the average annual operating cost RPE and average annual operating cost efficiency by price control through AMP 7.

*Table 4. Average Wholesale Operating Cost RPE and Efficiency by Price Control*

	% of Totex (App 24)	Opex RPE	Opex Efficiency
Water Resources	52.56%	0.68%	-2.67%
Water Network Plus	43.15%	0.64%	-4.90%
Waste Water Network Plus	47.07%	1.91%	-0.79%
Bio Resources	60.26%	0.23%	-3.09%

#### Wholesale Operating Cost RPE

The table above shows that all price controls are subject to real price effects which will exceed CPIH by between 0.23% and 1.91% each year (on average). This is based upon research DCWW has commissioned with third party experts who we have engaged to forecast specific inflationary cost pressures both locally and nationally, in areas where we cannot insulate ourselves from inflation through contractual arrangements (passing the risk to third parties) or in relation to costs which cannot be fully hedged (such as energy costs). An analysis of these cost pressures and the third parties we have used to forecast inflation is detailed in table 2 above.

The different levels of RPE in each price control reflects the different mix of costs in each:

- Bioresources has the lowest weighted average RPE, which is a combination of two factors. Firstly, bioresources is a net generator of energy and therefore benefits from relatively high-power income (shown as negative opex). Secondly, bioresources has a very low business rates cost, which has the highest RPE in the Waste Business (average 9% per annum).
- The two water price controls have very similar RPE's, in part driven by the fact that a similar proportion of their operating costs relate to labour (26% and 30% respectively). Water Resources is also impacted by NRW charges RPE of 1.5% on average which represent 30% of its costs. Water Network Plus has a similar net RPE (1.2% on average) impacting a similar proportion of its costs but made up of energy (positive RPE) and Business Rates (negative RPE).
- Waste Water Network Plus has the highest RPE because 10% of its costs comprise business rates (which we forecast RPE on average 9% per annum), 28% energy (2.5% average RPE per annum) and 26% Manpower costs (0.9% RPE).

#### Retail Operating Cost IPP

Residential Retail Input Price Pressure (IPP) averages 1.9%. IPP is forecast on doubtful debts (the majority of which relate to wholesale charges, which are subject to indexation) labour and brought in services. These costs total 80% of the residential retail cost base.

Business Retail Input Price Pressure (IPP) averages 1.5%. This reflects forecast inflation on doubtful debts, labour costs and brought in services as above, however, the IPP is lower because it impacts only 60% of the cost base. This is largely because of lower levels of bad debt in business retail.

#### Wholesale Operating Cost Efficiency

Table 4 above also shows that all price controls achieve operating cost efficiencies of between 0.79% and 4.9% on average per annum (although these are subject to year on year fluctuations which are discussed in the line by line commentaries below). These operating cost efficiencies reflect the efficiency programme outlined above. A summary of this efficiency programme is detailed below.

Our operating cost efficiency programme in the Water business delivers annual savings of £9m by 2024-25 as shown in the table below. The programme is based upon a number of work streams, designed to identify end to end process efficiencies in our clean water treatment cycle. The table below summarises the work streams that contribute to the efficiency programme for water.

<b>Water Operational Efficiencies by Work Stream</b>					
	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>	<b>23/24</b>	<b>24/25</b>
	<b>£'000</b>	<b>£'000</b>	<b>£'000</b>	<b>£'000</b>	<b>£'000</b>
Energy Schemes	570	770	1,170	1,370	1,570
Water Treatment	1,234	1,881	2,356	2,571	2,838
Water Distribution	4,430	4,490	4,545	4,545	4,545
<b>Total</b>	<b>6,234</b>	<b>7,141</b>	<b>8,071</b>	<b>8,486</b>	<b>8,953</b>

Operating cost efficiency is highest in Water Network Plus, which captures the impacts of the large efficiency programme relating to the Network Alliance and the treatment works optimisation programme. Further details of this and other initiatives can be found in the supporting document 3.6 PR19 Costs: efficiency, benchmarking and recovery.

Water Resources efficiency is driven by the increased generation of Hydro Power (treated as negative opex).

Our operating cost efficiency programme in Wastewater delivers annual savings of £4.5m by 24/25 as shown in the table below. The programme is based upon a number of work streams, designed to identify end to end process efficiencies in our waste water treatment cycle. The table below summarises the work streams that contribute to the efficiency programme for water.

<b>Waste Operational Efficiencies by Work Stream</b>					
	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>	<b>23/24</b>	<b>24/25</b>
	<b>£'000</b>	<b>£'000</b>	<b>£'000</b>	<b>£'000</b>	<b>£'000</b>
Management Restructure	347	347	347	347	347
Treatment Works Efficiencies	799	1,169	1,519	1,849	2,079
Transport Efficiencies	250	250	250	250	250
Bio Resources Efficiency	200	200	200	200	200
Scientific Team Efficiency	100	100	100	100	100
Energy Efficiency Schemes	400	600	1,000	1,200	1,300
Maintenance Efficiencies	210	210	210	210	210
<b>Total</b>	<b>2,306</b>	<b>2,876</b>	<b>3,626</b>	<b>4,156</b>	<b>4,486</b>

Operating cost efficiencies are higher in Bioresource than Waste Network Plus. The Bioresources business benefits from several efficiency workstreams including the management restructure, transport efficiencies, energy efficiency schemes and maintenance efficiencies. Wastewater Network Plus does not benefit to the same extent from the efficiency programme (for example, the efficiencies relating to bio resources).

#### Retail Operating Cost Efficiency

Residential Retail operating cost efficiency averages 3.5% per annum and is driven by a digital strategy and automation designed to reduce the amount of human intervention for routine interactions (where the customer chooses to interact in that way).

Business Retail operating cost efficiency is forecast to be lower at an average of 0.4%. Whilst our digital and automation strategies will have some impact in business retail, this will in part be offset by the costs associated with the increase to our competitive customer market, forecast to occur in 2020.

#### Wholesale Capital Investment Real Price Effects (RPE) and Efficiencies

The table below shows the average annual capital investment RPE and the capital efficiency by price control through AMP 7.

*Table 5. Average Wholesale Capital Efficiency by Price Control*

	<b>% of Totex (App 24)</b>	<b>Capex RPE</b>	<b>Capex Efficiency</b>
Water Resources	47.44%	0.13%	-2.64%
Water Network Plus	56.85%	0.13%	-2.79%
Waste Water Network Plus	52.93%	0.12%	-2.18%
Bio Resources	39.74%	0.12%	-2.50%

#### Wholesale Capital Investment RPE

We are not forecasting RPE on capital works performed by our capital partners because we believe that the new Network Alliance agreement (the long-term partnership agreement agreed with our capital solutions providers) transfers the RPE risk to the Alliance partner. Based on the real price effect risk in table 3 above, this mitigates £50m of inflation over the AMP period. We are able to

achieve this because we have established long term sustainable partnerships with our capital alliance partners, where both parties are incentivised to embrace innovation, lean deployment and genuine partnership working.

The small RPE forecast in the capital programme relates to the element of capitalised salaries from internal DCWW staff to support and manage the delivery of the capital programme (approximately £54m per annum). It reflects our forecasts for labour inflation.

#### Wholesale Capital Investment Efficiencies

The table above shows that all price controls achieve average capital investment efficiencies of between 2.18% and 2.79% on average per annum (although these are subject to year on year fluctuations which are discussed in the line by line commentaries below). The range of efficiency does not vary significantly between price controls but the relatively small variations are due to the fact that specific in house savings initiatives are applied to the relevant price control, so (for example) Water Network Plus is showing a relatively high level of efficiency because of the impact of the Network Alliance partnership initiative (more details of this and other initiatives can be found in the supporting document 3.6 PR19 Costs: efficiency, benchmarking and recovery).

#### Wholesale Capital Investment Efficiencies

Our Capital efficiency programme for Water delivers savings that total £130m over AMP 7 and for Waste the savings total £108m. This includes *scope and price* related savings included in the Capital Delivery efficiency in table 1 and savings related to *costs of service* (efficiency savings delivered in wholesale operations and support services in table 1 above that reduce the amount of capitalised overhead). The level of efficiency is measured against the AMP 6 out turn and captures efficiencies relating to improved ways of working, innovation, process simplification, procurement and challenges relating to scope. We work with Alliance partners on the majority of our capital delivery and are currently tendering for a Network Alliance to deliver our networks activity. These Alliances allow us to benefit from best practice across our and other industries. The incentives we set up allow us to share responsibility for delivery of our commitments and efficiency savings and give us the opportunity to manage workload in a flexible and efficient manner.

#### Retail Capital Investment IPP

We do not expect any external input price pressures to occur within our capital expenditure. We endeavour to manage any risks in this area as part of contract negotiations with third parties. The element of capitalised salaries subject to input price pressure in the retail business can be measured in 'tens of pounds' and therefore has been ignored for the purpose of this analysis.

#### Retail Capital Investment Efficiencies

We do not expect any external input price pressures to occur within our capital expenditure. We endeavour to manage any risks in this area as part of contract negotiations with third parties. The element of capitalised salaries subject to input price pressure in the retail business can be measured in 'tens of pounds' and therefore has been ignored for the purpose of this analysis.

#### Assumptions

##### Operating costs

For the purposes of forecasting RPE, IRE is treated as a capital item (the work is largely carried out by the same alliance partners and therefore we believe that we can mitigate inflationary impacts on this tranche of work and also drive efficiency into the programme). Once these efficiencies have been calculated however, the IRE element is included in the operating cost RPE and efficiency analysis discussed below.

For each of the price controls we have used 2019-20 as the base year. A summary of our methodology and assumptions is detailed below.

1. We have used the proportion of operating costs in 2019-20 and applied positive and negative specific inflation factors to each major cost line to calculate the following year weighted average inflation effect relative to the prior year. The specific inflation/deflation factors are taken from the third-party research commissioned with a number of partners, as summarised in table 2 above.
2. The 'in year' RPE has been calculated using the Ofwat formula for RPE relative to the prior year.
3. The efficiency impact is calculated by adjusting the prior year cost base for RPE and volume variances and comparing the calculated cost base to the actual cost base for the following year (in 2017-18 prices).
4. The volumes used in order to adjust for changes in activity levels are detailed in the table below. We have made the simplifying assumption that all operating costs move in line with changes in volume. Some costs will be divorced from changes in volume unless the volume change is significant (Labour, Business Rates for example), other costs are by their nature more variable (energy and chemicals for example).

<b>Volumetric Measures Used in Efficiency Calculations</b>		
Price Control	Volume Measure	Table Reference
Water Resources	Volume of Water delivered (potable)	WN2 - line 22
Water Network Plus	Volume of Water delivered (potable)	WN2 - line 22
Wastewater Network Plus	Volume of Waste Water Receiving Treatment	WN3 - line 13
Bioresources	Total Tonnes Dry Solids	Bio 1 - line 3

#### Capital

We are forecasting that the majority of the Capital plan (and IRE) are not subject to price inflation, because the new Capital Alliance agreements pass the risk to our alliance partners. The small RPE forecast in the capital programme relates to the element of capitalised salaries from internal DCWW staff to support and manage the delivery of the capital programme (approximately £54m per annum). It reflects our forecasts for labour inflation.

We have prepared the capital plan using out turn costs derived from our Unit Cost Database (where accurate data is available) and inflated this for the small impact of capitalised salaries as described above. We have then overlaid the benefits of our efficiency programme to arrive at a 'post efficiency' capital plan. The efficiency programme includes some reductions in overheads in addition to new ways of working and innovation. The difference between the two represents capital efficiency.

The level of efficiency is not uniform however. This is in part because some elements of the programme have more potential for improvement than others. The main difference relates to the fact that repeat, predictable, low risk activities more readily lend themselves to continuous improvement than bespoke work being performed for the first time. For example, the majority of leakage repair can be measured in terms of efficiency KPI's where we can work with our alliance partners to drive down cost. This contrasts with aspects of our Dam Safety programme, which are highly bespoke and require innovative engineering solutions to be designed in order to complete the work. Furthermore, specific savings initiatives impact more on parts of the capital programme than others (the Network Alliance in the water business being a good example of this).

#### Block A line 1. CPIH assumptions used in the RPE calculations

*The company's view of the year on year % change in the CPIH: Financial year average indices.*

#### Block B lines 2-6. Real price effects included in wholesale water resources

*Please enter the company view of operating expenditure RPE in wholesale water resources. Please enter the company view of RPE for capex associated with maintaining the long-term capability of infrastructure assets in wholesale water resources Please enter the company view*

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*of RPE for capex associated with maintaining the long-term capability of non-infrastructure assets in wholesale water resources*

*Please enter the company view of RPE for other infrastructure capital expenditure in wholesale water resources*

*Please enter the company view of RPE for other non-infrastructure capital expenditure in wholesale water resources*

Water Resources operating cost RPE averages 0.68% per annum during AMP 7 and is stable apart from 2022-23 which peaks at 0.8%. The slight increase is caused by negative RPE on energy generation in 2022-23 (reducing the positive impact of energy income RPE in the year). Effectively this reflects lower RPE resulting from energy income).

The average 0.68% RPE per annum on operating costs is forecast because 30% of water resources operating costs comprise labour, which has a forecast RPE of 0.9% on average in AMP 7 and 31% of costs relate to NRW abstraction charges, which have a forecast RPE of 1.5% in AMP 7.

We are forecasting that the majority of the Capital plan and IRE are not subject to price inflation, because the new Capital Alliance agreements pass the risk to our alliance partners. The small RPE forecast in the capital programme relates to the element of capitalised salaries from internal DCWW staff to support and manage the delivery of the capital programme (approximately £54m per annum). It reflects our forecasts for labour inflation.

**Block C lines 7-11. Real price effects included in wholesale water network plus**

*Please enter the company view of operating expenditure RPE in wholesale network plus.*

*Please enter the company view of RPE for capex associated with maintaining the long-term capability of infrastructure assets in wholesale water network plus.*

*Please enter the company view of RPE for capex associated with maintaining the long-term capability of non-infrastructure assets in wholesale water network plus.*

*Please enter the company view of RPE for other infrastructure capital expenditure in wholesale water network plus.*

*Please enter the company view of RPE for other non-infrastructure capital expenditure in wholesale water network plus.*

Water Network Plus operating cost RPE averages 0.64% per annum during AMP 7 and is more volatile than the Water Resources Price control. In 2021-22 it increases to 0.8%, which is due to 3.7% forecast RPE on energy consumption costs in the year, which are 16% of the Water Network Plus operating cost base. The operating cost RPE drops to 0% in the following year because of the negative RPE on energy costs in 2022-23 described above (which has the opposite effect in Water Network Plus because it is a significant net consumer of energy. The increases in 2023-24 and 2024-25 are both due to the RPE on energy in the last two years of the AMP (at 4.5% and 3% respectively). We are forecasting that the majority of the Capital plan and IRE are not subject to RPE's, because the new Capital Alliance agreements pass the risk to our alliance partners. The small RPE forecast in the capital programme relates to the element of capitalised salaries from internal DCWW staff to support and manage the delivery of the capital programme (approximately £54m per annum). It reflects our forecasts for labour inflation.

**Blocks D lines 12-16. Real price effects included in wholesale wastewater network plus**

*Please enter the company view of operating expenditure RPE in wholesale wastewater network plus.*

*Please enter the company view of RPE for capex associated with maintaining the long-term capability of infrastructure assets in wholesale wastewater network plus. Please enter the company view of RPE for capex associated with maintaining the long-term capability of non-infrastructure assets in wholesale wastewater network plus. Please enter the company view of RPE for other infrastructure capital expenditure in wholesale wastewater network plus.*

*Please enter the company view of RPE for other non-infrastructure capital expenditure in wholesale wastewater network plus.*

Wholesale Wastewater Network Plus operating cost RPE averages 1.91% per annum through AMP 7. This is the highest RPE experienced in any price control and reflects the fact that 26% of operating costs relate to labour (forecast average RPE of 0.91% per annum), 28% of operating costs relate to Energy (forecast average RPE of 2.5% per annum) and 10% of operating costs relate to Business Rates (forecast average RPE of 9%). The business rates inflation reflects the revaluation that occurs in 2021-22, but also reflects anticipated changes to Welsh Government legislation that creates additional price pressure that is unique to Wales. See the table commentary for WWS7 for more details.

Operating cost RPE peaks in 2021-22 at 4.85%, which is driven largely by a 37.5% increase in business rates resulting from the business revaluation exercise scheduled for that year (we have not forecast any other revaluations in AMP 7). The 3.7% forecast RPE on energy prices in 2021-22 also contributes to this peak. In 2022-23 the RPE drops to 0.18% which reflects a lower RPE on business rates (2.4%) but also, the negative RPE on energy in this year as already described above.

We are forecasting that the majority of the Capital plan and IRE are not subject to price inflation, because the new Capital Alliance agreements pass the risk to our alliance partners. The small RPE forecast in the capital programme relates to the element of capitalised salaries from internal DCWW staff to support and manage the delivery of the capital programme (approximately £54m per annum). It reflects our forecasts for labour inflation.

Blocks E lines 17-21. Real price effects included in wholesale wastewater bioresources

*Please enter the company view of operating expenditure RPE in wholesale bioresources.*

*Please enter the company view of RPE for capex associated with maintaining the long-term capability of infrastructure assets in wholesale bioresources.*

*Please enter the company view of RPE for capex associated with maintaining the long-term capability of non-infrastructure assets in wholesale bioresources.*

*Please enter the company view of RPE for other infrastructure capital expenditure in wholesale bioresources.*

*Please enter the company view of RPE for other non-infrastructure capital expenditure in wholesale bioresources.*

Bioresource operating cost RPE averages 0.23% per annum through AMP 7, which is the lowest RPE of any of the price controls. This reflects the fact that Bioresource is a significant generator of energy and therefore benefits from high RPE's on energy throughout the AMP (average Energy inflation is forecast at 4.5% per annum). This is offset however, by the fact that 46% of Bioresource operating costs relate to labour (inflation forecast 2.91% on average per annum).

The volatility in the forecast operating cost RPE mirrors the volatility in Energy price inflation in AMP 7. However, because Bioresource is a net generator of energy, high inflation has the effect of creating negative RPE and visa-versa.

We are forecasting that the majority of the Capital plan and IRE are not subject to price inflation, because the new Capital Alliance agreements pass the risk to our alliance partners. The small RPE forecast in the capital programme relates to the element of capitalised salaries from internal DCWW staff to support and manage the delivery of the capital programme (approximately £54m per annum). It reflects our forecasts for labour inflation.

Blocks F lines 22-23. Input price pressures included in residential retail

*Please enter the company view of input price pressures for total operating expenditure in residential retail.*

*Please enter the company view of input price pressures for capital expenditure in residential retail.*

IPP has been specifically identified in 80% of residential retail Opex. Doubtful debts (37%), staff costs, (37%) and bought in services (26%), of which 90% of the doubtful debt charge relates to

wholesale charges which will be subject to an annual indexation allowance. A study commissioned with Economic insight<sup>1</sup> investigated the rate of wage growth in our region for the specific retail job roles we employ. The study indicated that DCWW retail wage inflation is anticipated to rise 2.7% (avg.) annually each year of AMP7 (13.3% across AMP7). This is in line with average pay settlements in 2016-17 and 2017-18. Further investigation into the drivers of our bought in services identify that staff costs (for example IT support, postal services) or customer bills (for example debt collection agency costs) drive costs and therefore some specific areas of bought in services are exposed to IPP. The remaining 20% of the residential retail cost base is not found to have specific or documented cost pressure and as such DCWW acknowledges and accepts the risk of this proportion of costs also being exposed to CPIH as an additional efficiency challenge.

Overall operating cost RPE for residential retail is relatively stable year on year, with only gradual increases in the rate observed over the course of AMP7.

We do not expect any external input price pressures to occur within our capital expenditure. We endeavour to manage any risks in this area as part of contract negotiations with third parties. The element of capitalised salaries subject to input price pressure in the retail business can be measured in 'tens of pounds' and therefore has been ignored for the purpose of this analysis.

#### Blocks G lines 24-25. Input price pressures included in business retail

*Please enter the company view of input price pressures for total operating expenditure in business retail.*

*Please enter the company view of input price pressures for capital expenditure in business retail.*

The data provided in this line is compliant with definition provided above and with 'Q200 published in Q&A feedback dated 15th May 2018'.

IPP has been specifically identified in 60% of residential retail Opex. Doubtful debts (16%), staff costs, (37%) and bought in services (47%), of which 90% of the doubtful debt charge relates to wholesale charges which will be subject to an annual indexation allowance. A study commissioned with Economic insight investigated the rate of wage growth in our region for the specific retail job roles we employ. The study indicated that DCWW retail wage inflation is anticipated to rise 2.7% (avg.) annually each year of AMP7 (13.3% across AMP7). This is in line with average pay settlements in 2016-17 and 2017-18. Further investigation into the drivers of our bought in services identify that staff costs (for example IT support, postal services) or customer bills (for example debt collection agency costs) drive costs and therefore some specific areas of bought in services are exposed to IPP. The remaining 40% of the commercial retail cost base is not found to have specific or documented cost pressure and as such DCWW acknowledges and accepts the risk of this proportion of costs also being exposed to CPIH as an additional efficiency challenge.

Overall operating cost RPE for commercial retail is relatively stable year on year, with only gradual increases in the rate over the course of AMP7.

We do not expect any external input price pressures to occur within our capital expenditure. We endeavour to manage any risks in this area as part of contract negotiations with third parties. The element of capitalised salaries subject to input price pressure in the retail business can be measured in 'tens of pounds' and therefore has been ignored for the purpose of this analysis.

#### Blocks H 26-30. Assumed efficiency gains in wholesale water resources

*Please enter the company view of assumed efficiency gains for operating expenditure in wholesale water resources.*

*Please enter the company view of assumed efficiency gains for capex associated with maintaining the long-term capability of infrastructure assets in wholesale water resources. Please enter the company view of assumed efficiency gains for capex associated with maintaining the long-term capability of non-infrastructure assets in wholesale water resources.*

*Please enter the company view of assumed efficiency gains for other infrastructure capital expenditure in wholesale water resources.*

*Please enter the company view of assumed efficiency gains for other non-infrastructure capital expenditure in wholesale water resources.*

Water Resources operating cost efficiencies peak at 10.69% in 2020-21 and reflect the early implementation of our overall efficiency programme in AMP 7 of which £56m of efficiencies are planned for 2021 (see table 1 above). The apparent negative efficiency in the middle three years is driven by the loss of derivative income which delivers £1.7m of income in 2020 and reduces to £0.3m in 2021 (there are no derivatives in place for the remainder of the AMP). If a similar derivative income was delivered in the middle 3 years of the AMP, efficiencies would average 2.5% for these years. In 2024-25 significant additional hydro generated energy comes on stream which reduces the amount of energy import required.

Capital Maintenance efficiency is highest in year one of the AMP which also reflects the front loading of our efficiency schemes as demonstrated in table 1 above. Further efficiency is generated in each remaining year of the AMP (albeit at a lower run rate) and is relatively stable at an average 1.4% per annum in years 2-5. The volatility in non infra investment in 2022-23 reflects the mix of the programme of work which contains some less routine maintenance work upon which we do not anticipate generating significant efficiency savings.

Other Capital Expenditure efficiency is highest in year one of the AMP which also reflects the front loading of our efficiency schemes as demonstrated in table 1 above. In years two to five the efficiency gradually decreases, which reflects some difficult, more bespoke work programmed towards the end of the AMP.

Blocks I lines 31-35. Assumed efficiency gains in wholesale water network plus

*Please enter the company view of assumed efficiency gains for operating expenditure in wholesale water network plus.*

*Please enter the company view of assumed efficiency gains for capex associated with maintaining the long-term capability of infrastructure assets in wholesale water network plus.*

*Please enter the company view of assumed efficiency gains for capex associated with maintaining the long-term capability of non-infrastructure assets in wholesale water network plus.*

*Please enter the company view of assumed efficiency gains for other infrastructure capital expenditure in wholesale water network plus.*

*Please enter the company view of assumed efficiency gains for other non-infrastructure capital expenditure in wholesale water network plus.*

The data provided in this line is compliant with definition provided above and additional guidance published in the Q&A Feedback Documents printed under the title of 'Final Methodology Queries and Answers'.

Water Network Plus operating cost efficiencies peak at 15.21% in 2020-21 and reflect the early implementation of our overall efficiency programme in AMP 7 of which £56m of efficiencies are planned for 2021 (see table 1 above). The negative efficiency in 2024-25 reflects an increase spend in cyclical ground and building maintenance cost scheduled for the end of the AMP.

Capital Maintenance efficiency is highest in year one of the AMP which also reflects the front loading of our efficiency schemes as demonstrated in table 1 above. Further efficiency is generated in each remaining year of the AMP (albeit at a lower run rate) and is relatively stable at an average 1.27% per annum in years 2-5. The gradual reduction in efficiency delivery on infrastructure investment in years 3-5 of the AMP reflects the mix of the programme of work which contains some less routine maintenance work upon which we do not anticipate generating significant efficiency savings.

Other capital expenditure efficiency is highest in year one of the AMP which also reflects the front loading of our efficiency schemes as demonstrated in table 1 above. Further efficiency is generated in each remaining year of the AMP (albeit at a lower run rate) and the efficiencies are more volatile, reflecting the mix of work in the programme in each year. In years with lower levels of bespoke work

and higher levels of routine, low risk work, greater efficiency can be extracted from alliance partners.

Blocks J lines 36-40. Assumed efficiency gains in wholesale wastewater network plus

*Please enter the company view of assumed efficiency gains for operating expenditure in wholesale wastewater network plus.*

*Please enter the company view of assumed efficiency gains for capex associated with maintaining the long-term capability of infrastructure assets in wholesale wastewater network plus.*

*Please enter the company view of assumed efficiency gains for capex associated with maintaining the long-term capability of non-infrastructure assets in wholesale wastewater network plus.*

*Please enter the company view of assumed efficiency gains for other infrastructure capital expenditure in wholesale wastewater network plus.*

*Please enter the company view of assumed efficiency gains for other non-infrastructure capital expenditure in wholesale wastewater network plus.*

Operating cost efficiencies do not impact until year two of the AMP as a result of a significantly higher element of operating infrastructure renewals expenditure which in fact impacts upon both year one and year two of the AMP (when compared to the end of AMP 6). The 'ramping up' of renewals expenditure activity levels (from £25m to £31m) has the impact of creating negative efficiency until it reaches its new 'run rate' in 2023-24. The impact of the efficiency programme discussed above starts to impact in year two of the AMP, and averages 2% per annum from 2021-22 to 2024-25

Capital Maintenance efficiency is highest in year one of the AMP which also reflects the front loading of our efficiency schemes as demonstrated in table 1 above. Further efficiency is generated in each remaining year of the AMP (albeit at a lower run rate) and is relatively stable at an average 1.5% per annum in years 2-5. The increase in efficiency in year 5 to 3.96% in non-infrastructure investment reflects the mix of the programme of work where we can anticipate larger savings on more routine tranches of work.

Other capital expenditure efficiency is highest in year one of the AMP which also reflects the front loading of our efficiency schemes as demonstrated in table 1 above. Other capital expenditure efficiencies are non-uniform, reflecting the mix of work in the programme in each year, with higher levels of bespoke work in 2023-24, which leads to forecast negative efficiency. This reflects some difficult, more bespoke work programmed towards the end of the AMP.

Blocks K lines 41-45. Assumed efficiency gains in wholesale wastewater bioresources

*Please enter the company view of assumed efficiency gains for operating expenditure in bioresources.*

*Please enter the company view of assumed efficiency gains for capex associated with maintaining the long-term capability of infrastructure assets for operating expenditure in bioresources.*

*Please enter the company view of assumed efficiency gains for capex associated with maintaining the long-term capability of non-infrastructure assets for operating expenditure in bioresources.*

*Please enter the company view of assumed efficiency gains for other infrastructure capital expenditure for operating expenditure in bioresources. Please enter the company view of assumed efficiency gains for other non-infrastructure capital expenditure for operating expenditure in bioresources.*

Bioresource operating cost efficiencies peak at 9.32% in 2020-21 and reflect the early implementation of our overall efficiency programme in AMP 7 of which £56m of efficiencies are planned for 2021 (see table 1 above). The negative efficiency in 2024-25 reflects opex required to meet our stakeholder (NRW & EA) commitments under the NEP.

Capital Maintenance efficiency is highest in year one of the AMP which also reflects the front loading of our efficiency schemes as demonstrated in table 1 above. Further efficiency is generated in each remaining year of the AMP (albeit at a lower run rate) and is more volatile than for the other price

controls, particularly in relation to non-infrastructure investment. This reflects the mix of the programme of work, with more routine, low risk work in year 5 of the AMP, which will result in greater efficiency from our capital alliance partnership.

There is no investment planned in Other Capital Expenditure – infrastructure in Bioresource in Amp 7. Other capital expenditure efficiency in non-infrastructure investment is highest in year one of the AMP which also reflects the front loading of our efficiency schemes as demonstrated in table 1 above. Further efficiency is generated in each remaining year of the AMP (albeit at a lower run rate) and is relatively stable at an average 0.75% per annum in years 2-5.

Blocks L lines 46-47. Assumed efficiency gains in residential retail

*Please enter the company view of assumed efficiency gains for operating expenditure in residential retail.*

*Please enter the company view of assumed efficiency gains for capital expenditure in residential retail.*

The data provided in this line is compliant with definition provided above and with 'Q200 published in Q&A feedback dated 15th May 2018'.

Specific detail regarding our investment plan for AMP7 is provided in the residential retail business plan chapter. 2.5 PR19 Household Retail Business Plan

In AMP7 we will transform the way in which our residential retail business operates through the introduction of new technology, new ways of working and providing our people with new skills, which will deliver efficiencies averaging 3.5% per annum. Our plan include:

- Creating a digital platform that supports all our of customer journeys, not only routine transactions removing the need for a human touch
- The introduction of automation technology, including robotics and artificial intelligence, into our customer contact activities, building on the innovation (for example our bi-lingual chatbot) we have introduced in AMP6. This will streamline processes and remove back office handling.

Capital efficiencies reflect reductions in our support service overhead which is capitalised in supporting the delivery of capital schemes across the business.

Blocks M lines 48-49 Assumed efficiency gains in business retail

*Please enter the company view of assumed efficiency gains for operating expenditure in business retail.*

*Please enter the company view of assumed efficiency gains for capital expenditure in business retail.*

The data provided in this line is compliant with the definition provided above and with Ofwat query Q200 published in Q&A feedback dated 15 May 2018.

Specific detail regarding our investment plan for AMP7 is provided in the business retail business plan chapter.

In AMP7, much of our transformation plan for residential retail also benefits our non-eligible business retail customers. With efficiencies coming from the adoption of technologies such as artificial intelligence and predictive analytics, exploration and expansion of 'smart' metering. However, we also plan to expand our offering to business retail customers which will result in a more bespoke service for non-routine activities as part of our commitment to ensuring that our business customers enjoy a combination of service and price that is at least as good as the best available in England.

Taking into account that in our preparations for changes to the market place in 2020 (which results in a significant increase in competitive retail customers) we anticipate that the transformation programme outlined above with have reduced impact on the cost to serve these customers.

As with residential efficiencies, capital efficiencies reflect reductions in our support service overhead which is capitalised in supporting the delivery of capital schemes across the business.

## App25 - PR14 reconciliation adjustments summary

### Lines 1 – 4 Total Adjustment RCV carry forward to PR19

*2010-15 reconciliation adjustments. These are the further adjustments arising from the update to take account of actual 2014-15 performance. Note – lines 2 and 4 relate to CIS revenue adjustments only, as per the PR09 legacy blind year adjustments model (published in December 2017)*

The adjustments are taken from the “Updated 2010-15 Reconciliation” published in December 2017.

### Lines 5 – 6 CIS RCV inflation correction

*The adjustments to ensure consistency in how we apply inflation indices for the PR09 capital expenditure incentive scheme, we published the adjustments in October 2016.*

The adjustments are obtained from the October 2016 publication and December 2017 publication “Updated 2010-15 Reconciliation”.

### Line 7 - Water ~ Total Adjustment RCV carry forward to PR19 at 2017-18 FYA CPIH deflated price base

*Line 1 inflated to 2017-18 prices. This is an output from the RCV adjustments model*

Output from the RCV adjustment model.

### Line 8 - Water ~ Total Adjustment Revenue carry forward to PR19 at 2017-18 FYA CPIH deflated price base

*Line 2 inflated to 2017-18 prices. This is an output from the revenue adjustments model.*

Output from the revenue adjustment model.

### Line 9 - Wastewater ~ Total Adjustment RCV carry forward to PR19 at 2017-18 FYA CPIH deflated price base

*Line 3 inflated to 2017-18 prices. This is an output from the RCV adjustments model.*

Output from the RCV adjustment model.

### Line 10 - Wastewater ~ Total Adjustment Revenue carry forward to PR19 at 2017-18 FYA CPIH deflated price base

*Line 4 inflated to 2017-18 prices. This is an output from the revenue adjustments model*

Output from the revenue adjustment model.

### Line 11 - Water ~ CIS RCV inflation correction at 2017- 18 FYA CPIH deflated price base

*Line 5 inflated to 2017-18 prices. This is an output from the RCV adjustments model.*

Output from the RCV adjustment model.

### Line 12 - Wastewater ~ CIS RCV inflation correction at 2017-18 FYA CPIH deflated price base

*Line 6 inflated to 2017-18 prices. This is an output from the RCV adjustments model*

Output from the RCV adjustment model.

## App26 - RoRE Scenarios

### Table overview

This table holds all the scenario data for a high and low variant to the main business plan. Details of these scenarios can be found in Supporting Document 5.6 PR19 Risk and Return analysis and for ODIs in Supporting Document 5.5 PR19 Outcome delivery incentives.

We have identified some issues with the lines in this data table and the RoRE input lines in the financial model on the 'Sensi' tab.

1. Block I and J of App26 do not include a line for business retail ODIs. We have included business retail ODIs in residential retail line 70 and 76 for the high and low case respectively.
2. The 'Sensi' input sheet in the financial model does not have inputs for retail ODIs for residential retail or business retail. We have included the retail ODIs (lines 70 and 76 of App26) in the dummy price control inputs in the financial model row 448 and 449 for the high and low case respectively. This ensures that the overall impact of the high and low case for ODIs is correctly shown at an appointee level, without distorting the other wholesale price control totals in the Dashboard.

We have also identified some issues with the RoRE calculations on the 'RoRE\_calc' tab in the financial model. Details of these issues are described in the document accompanying the populated financial model PR19 Financial Modelling.

### Line Commentary

Block A and B

Block A and B report the revenue scenarios for the high and low RORE case for each price control.

For Water network plus and Water resources, App26 and the 'Sensi' worksheet in the financial model have lines for:

- Total revenue impact;
- Water trading incentive export revenue impact; and
- Water trading incentive revenue impact.

Only the total revenue impact lines are fed through into the RoRE ranges for the Appointee in the 'Dashboard' worksheet.

In order for the financial model to show the full RoRE range covered by our high and low case revenue scenarios we have interpreted the 'Total revenue impact' lines of App26 as being the total of the Water trading incentive export revenue impact, water trading incentive revenue impact lines, plus other revenue impacts.

Water trading – High case

Line 5, Line 6 and Line 28

Our high RoRE case includes values for water trading in the water resources price control, of £4.4426m per annum from 2022-23 onwards (line 5) 'water resources water trading incentive export revenue impact'. This represents a new water trade. There are no incremental costs associated with this trade and therefore no values are included in (line 28) 'water resources water trading export expenditure impact'. We have assumed that there is no incentive impact of this new trade and therefore the values in (line 6) 'water resources water trading incentive revenue impact' are nil.

Line 2, Line 3 and Line 24

There are no water trading impacts in water network plus.

Water trading – Low case

Line 13, 14, 16, 17, 41 and 45

Our low case assumes all existing water trades remain unchanged from the core plan. And therefore these lines show nil values.

Total revenue impacts – High case

Line 1, 7, 10, 11

There are no revenue impacts in the high case for Water network, Wastewater network, Residential Retail and Business Retail price controls.

Line 4 – Water resources

This line represents the high case impact of additional revenue due to increased volume of water sold under existing bulk supply agreement and new trades included in line 5.

	2020-21	2021-22	2022-23	2023-24	2024-25
	£m	£m	£m	£m	£m
Increase in bulk supply volumes	2.159	2.159	2.159	2.159	2.159
New water trade (App25 line 5)	-	-	4.426	4.426	4.426
App26 line 4	2.159	2.159	6.584	6.584	6.584

Line 8 – Bio resources

This line represents additional revenue from Bio resources trading activity due to short term trades of surplus capacity. The revenue in this line is presented net of the marginal costs this trading activity would attract.

Total revenue impacts – Low case

Line 12, 15, 18, 19, 21

There are no revenue impacts in the Water resources, Water network, Wastewater network, Bio resources and Residential Retail price controls in the low case.

Line 22

This line includes the low case scenario on Business Retail revenue, which represents a reduction in Business Retail margins.

Block C, D, E, F, G and H

Block C and D report the Totex scenarios for the high and low RORE case for each price control.

For Water network plus and Water resources, App26 and the ‘Sensi’ worksheet in the financial model have lines for:

- Expenditure impact;
- Water trading incentive export expenditure impact;
- Uncertainty mechanisms impact; and
- Cost impact.

The other price controls have inputs for:

- Expenditure impact;
- Uncertainty mechanisms impact and
- Cost impact.

For each price control the cost impact line is the total of the other lines in the Totex scenario.

Lines 25, 29, 32, 35, 42, 46, 49, 52, 58, 61 – Uncertainty mechanisms

Our high and low case do not include events that would give rise to an interim determination either due to circumstances having a substantial effect on the appointed business or in relation to relevant changes of circumstance and notified items therefore all the uncertainty mechanism lines have nil values.

Lines 24, 28, 41, 45 – Water trading expenditure impact

For further details, see Water trading section above.

There are no water training impacts in the low case.

There are no water network trading impacts.

There is water resources trading impact in the high case, however there are no incremental costs associated with this trade and therefore no values are included in line 28.

Blocks I and J

Block I and J report the outcome delivery incentives (ODI) financial outperformance/underperformance payments for the high and low RORE case. The ODI financial performance is calculated using Monte Carlo simulations on our 26 ODIs (excluding C-Mex and D-Mex) outlined in App1. Further details of the Monte Carlo simulation is outlined in Supporting Document 5.5 PR14 Outcome delivery incentives.

The Monte Carlo simulations analysis is completed at the appointee level. The table reports the underperformance and outperformance payments at the P10 and P90 level.

	2020-21	2021-22	2022-23	2023-24	2024-25
<del>Underperformance Payments</del>	<del>(35.4)</del>	<del>(34.4)</del>	<del>(34.4)</del>	<del>(34.6)</del>	<del>(39.3)</del>
<b>Underperformance Payments</b>	<b>-26.2706</b>	<b>-28.6495</b>	<b>-28.2776</b>	<b>-27.7755</b>	<b>-29.4641</b>
<del>Outperformance Payments</del>	<del>27.9</del>	<del>28.7</del>	<del>28.2</del>	<del>27.3</del>	<del>32.8</del>
<b>Outperformance Payment</b>	<b>24.4973</b>	<b>23.53978</b>	<b>22.2601</b>	<b>24.4944</b>	<b>25.1713</b>

The outperformance and underperformance payments are allocated between the price controls based on price control allocation in App1. The table below shows reports the price control allocation and the outperformance and underperformance payment over the AMP.

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PC name	Price Allocation (%)									Out-performance Payment	Under-Performance	Out-performance Payment	Under-Performance
	Water resources	Water network plus	Wastewater network plus	Bioresources (sludge)	Residential retail	Business retail	Direct procurement for	Dummy control	Total				
Tap Water Quality Compliance Risk Index		100.0%							100.0%		25		19
Water supply interruptions		100.0%							100.0%	25	25	5	14
Acceptability of drinking water		100.0%							100.0%	13	13	13	13
Water mains bursts		100.0%							100.0%		7		7
Lead supply pipes replaced		100.0%							100.0%	7	7	7	7
Water and wastewater Treatment works compliance			100.0%						100.0%		13		13
Wastewater treatment works 'look-up table' compliance	-	-	100.0%	-	-	-	-	-	100.0%		7		
Pollution incidents from Wastewater			100.0%						100.0%	25	25	9	11
Leakage		100.0%							100.0%	25	25	3	4
km of river improved			100.0%						100.0%	13	13	13	13
Bioresources energy generation				100.0%					100.0%	7	7	7	7
Bioresources disposal compliance				100.0%					100.0%				7
Customer trust	4.4%	34.2%	48.4%	4.5%	8.5%				100.0%	32	32	16	16
Business customer satisfaction						100.0%			100.0%	7	7	7	7
Sewer flooding on customer property (internal)			100.0%						100.0%	25	25	1	4
Sewer flooding on customer property (external)			100.0%						100.0%	7	7	5	5

Welsh Water Appointed Business Plan Table Commentaries

PC name	Price Allocation (%)								
	Water resources	Water network plus	Wastewater network plus	Bioresources (sludge)	Residential retail	Business retail	Direct procurement for	Dummy control	Total
Sewer collapses			100.0%						100.0%
Total complaints		37.5%	53.2%		9.3%				100.0%
Surface water removed from sewers			100.0%						100.0%
Asset Resilience (reservoirs)	100.0%								100.0%
Asset Resilience (water network+ above ground)		100.0%							100.0%
Asset Resilience (water network+ below ground)		100.0%							100.0%
Asset Resilience (waste network+ above ground)			100.0%						100.0%
Asset Resilience (waste network+ below ground)			100.0%						100.0%
Community education		41.4%	58.6%						100.0%
Visitors to recreational facilities	100.0%								100.0%

Out-performance Payment	Under-Performance	Out-performance Payment	Under-Performance
	7		7
<del>13</del>	<del>13</del>	13	13
7	7	7	7
<del>13</del>	<del>13</del>	13	13
<del>13</del>	<del>13</del>	13	13
<del>13</del>	<del>13</del>	13	13
<del>13</del>	<del>13</del>	13	13
<del>13</del>	<del>13</del>	13	13
7	7	7	7
7	7	7	7

## Welsh Water Appointed Business Plan Table Commentaries

The price control allocations are applied to the outperformance and underperformance payments to determine the proportion of outperformance and underperformance payments per price control.

PC name	Outperformance Payments per Price Control								
	Water resources	Water network plus	Wastewater network plus	Bioresources (sludge)	Residential retail	Business retail	Direct procurement	Dummy control	Total
Tap Water Quality Compliance Risk Index									
Water supply interruptions		25.0 5.0							25.0 5.0
Acceptability of drinking water		13.0							13.0
Water mains bursts									
Lead supply pipes replaced		7.0							7.0
Water and wastewater Treatment works compliance									-
Wastewater treatment works 'look up table' compliance									-
Pollution incidents from Wastewater			25.0 9						25.0 9
Leakage		25.0 3							25.0 3
km of river improved			13.0						13.0
Bioresources energy generation				7.0					7.0
Bioresources disposal compliance									-
Customer trust	1.4 0.7	11.0 5.5	15.5 7.7	1.4 0.7	2.7 1.4				32.0 16
Business customer satisfaction						7.0			7.0
Sewer flooding on customer property (internal)			25.0 1.0						25.0 1.0
Sewer flooding on customer property (external)			7.0 5.0						7.0 5.0
Sewer collapses									-
Total complaints		4.9	6.9		1.2				13.0
Surface water removed from sewers			7.0						7.0
Asset Resilience (reservoirs)	13.0								13.0
Asset Resilience (water network+ above ground)		13.0							13.0
Asset Resilience (water network+ below ground)		13.0							13.0
Asset Resilience (waste network+ above ground)			13.0						13.0
Asset Resilience (waste network+ below ground)			13.0						13.0
Community education		2.9	4.1						7.0
Visitors to recreational facilities	7.0								7.0
<b>Total</b>	<b>21.4</b>	<b>114.8</b>	<b>129.5</b>	<b>8.4</b>	<b>3.9</b>	<b>7.0</b>	<b>0.0</b>	<b>0.0</b>	<b>285.0</b>
<b>Proportion</b>	<b>8%</b>	<b>40%</b>	<b>45%</b>	<b>3%</b>	<b>1%</b>	<b>3%</b>	<b>0%</b>	<b>0%</b>	
<b>Total</b>	<b>20.7</b>	<b>67.2</b>	<b>79.8</b>	<b>7.7</b>	<b>2.6</b>	<b>7.0</b>	<b>0.0</b>	<b>0.0</b>	<b>185.0</b>
<b>Proportion</b>	<b>11.2%</b>	<b>36.3%</b>	<b>43.1%</b>	<b>4.2%</b>	<b>1.4%</b>	<b>3.8%</b>	<b>0.0%</b>	<b>0.0%</b>	

Welsh Water Appointed Business Plan Table Commentaries

Underperformance Payments

PC name	Underperformance Payments per Price Control								
	Water resources	Water network plus	Wastewater network plus	Bioreources (sludge)	Residential retail	Business retail	Direct procurement	Dummy control	Total
Tap Water Quality Compliance Risk Index		25.0 19							25.0 19
Water supply interruptions		25.0 14							25.0 14
Acceptability of drinking water		13.0							13.0
Water mains bursts		7.0							7.0
Lead supply pipes replaced		7.0							7.0
Water and wastewater Treatment works compliance			13.0						13.0
Wastewater treatment works 'look-up table' compliance			7.0						7.0
Pollution incidents from Wastewater			25.0 11						25.0 11
Leakage		25.0 4							25.0 4
km of river improved			13.0						13.0
Bioreources energy generation				7.0					7.0
Bioreources disposal compliance				7.0					7.0
Customer trust	1.4 0.7	11.0 5.5	15.5 7.7	1.4 0.7	2.7 1.4				32.0 16
Business customer satisfaction						7.0			7.0
Sewer flooding on customer property (internal)			25.0 4						25.0 4
Sewer flooding on customer property (external)			7.0 5						7.0 5
Sewer collapses			7.0						7.0
Total complaints		4.9	6.9		1.2				13.0
Surface water removed from sewers			7.0						7.0
Asset Resilience (reservoirs)	13.0								13.0
Asset Resilience (water network+ above ground)		13.0							13.0
Asset Resilience (water network+ below ground)		13.0							13.0
Asset Resilience (waste network+ above ground)			13.0						13.0
Asset Resilience (waste network+ below ground)			13.0						13.0
Community education		2.9	4.1						7.0
Visitors to recreational facilities	7.0								7.0
<b>Total</b>	<b>21.4</b>	<b>146.8</b>	<b>156.5</b>	<b>15.4</b>	<b>3.9</b>	<b>7.0</b>	<b>0.0</b>	<b>0</b>	<b>351.0</b>
<b>Proportion</b>	<b>6%</b>	<b>42%</b>	<b>45%</b>	<b>4%</b>	<b>1%</b>	<b>2%</b>	<b>0%</b>	<b>0%</b>	
<b>Total</b>	<b>20.7</b>	<b>103.2</b>	<b>104.8</b>	<b>14.7</b>	<b>2.6</b>	<b>7.0</b>	<b>0.0</b>	<b>0</b>	<b>253.0</b>
<b>Proportion</b>	<b>8%</b>	<b>41%</b>	<b>41%</b>	<b>6%</b>	<b>1%</b>	<b>3%</b>	<b>0%</b>	<b>0%</b>	

The proportions are multiplied by the underperformance and outperformance payments at the P10 and P90 to obtain the ODIs for a low and high RORE case respectively reported in App26. App26 does not include a line for business retail, we have included business retail in residential retail. The financial model does not have inputs for retail ODIs for either retail price control. We have included the retail ODIs in the dummy price control inputs in the financial model. This ensures that the overall impact is shown at an appointee level without distorting the other wholesale price control totals.

## Welsh Water Appointed Business Plan Table Commentaries

### Block I

ODI for a high RoRE Case

	2020/21	2021/22	2022/23	2023/24	2024/25
-					
Water resources	2.1	2.2	2.1	2.1	2.5
Water network plus	11.2	11.5	11.3	11.0	13.2
Wastewater network plus	12.7	13.0	12.8	12.4	14.9
Bioresources (sludge)	0.8	0.8	0.8	0.8	1.0
Residential retail	0.4	0.4	0.4	0.4	0.5
Business retail	0.7	0.7	0.7	0.7	0.8
Direct procurement for customers					
Dummy Control					
Total	27.9	28.7	28.2	27.3	32.8

ODI for a high RoRE Case

	2020/21	2021/22	2022/23	2023/24	2024/25
Water resources	2.7	2.6	2.5	2.7	2.8
Water network plus	8.9	8.6	8.1	8.9	9.1
Wastewater network plus	10.6	10.1	9.6	10.6	10.9
Bioresources (sludge)	1.0	1.0	0.9	1.0	1.0
Residential retail	0.3	0.3	0.3	0.3	0.4
Business retail	0.9	0.9	0.8	0.9	1.0
Direct procurement for customers	-	-	-	-	-
Dummy Control	-	-	-	-	-
Total	24.5	23.5	22.3	24.5	25.2

### Block J

ODI for a low RoRE Case

	2020/21	2021/22	2022/23	2023/24	2024/25
-					
Water resources	(2.2)	(2.1)	(2.1)	(2.1)	(2.4)
Water network plus	(14.8)	(14.4)	(14.4)	(14.5)	(16.4)
Wastewater network plus	(15.8)	(15.3)	(15.3)	(15.4)	(17.5)
Bioresources (sludge)	(1.6)	(1.5)	(1.5)	(1.5)	(1.7)
Residential retail	(0.4)	(0.4)	(0.4)	(0.4)	(0.4)
Business retail	(0.7)	(0.7)	(0.7)	(0.7)	(0.8)
Direct procurement for customers	-	-	-	-	-
Dummy Control	-	-	-	-	-
Total	(35.4)	(34.4)	(34.4)	(34.6)	(39.3)

ODI for a low RoRE Case

	2020/21	2021/22	2022/23	2023/24	2024/25
Water resources	(2.2)	(2.3)	(2.3)	(2.3)	(2.4)
Water network plus	(10.7)	(11.7)	(11.5)	(11.3)	(12.0)
Wastewater network plus	(10.9)	(11.9)	(11.7)	(11.5)	(12.2)
Bioresources (sludge)	(1.5)	(1.7)	(1.6)	(1.6)	(1.7)
Residential retail	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)
Business retail	(0.7)	(0.8)	(0.8)	(0.8)	(0.8)
Direct procurement for customers	0.0	0.0	0.0	0.0	0.0
Dummy Control	0.0	0.0	0.0	0.0	0.0
Total	(26.3)	(28.6)	(28.3)	(27.8)	(29.5)

## Welsh Water Appointed Business Plan Table Commentaries

### Block K and L

Block K and L report the WaterworCX scenarios for the high and low RORE case.

The high case assumed the maximum performance payment for C-Mex and D-Mex. The low case assumes no performance penalties apply at the P90 probability level, for C-Mex and D-Mex.

The calculations of the performance payments are included in Supporting Document 5.6 PR19 Risk and Return analysis.

### Block M and N

Block M and N report the Financing performance ~ cost of new debt scenarios for the high and low RORE case. Calculations of the financing performance impacts are included in Supporting Document 5.6 PR19 Risk and Return analysis.

### Block O - Tax rate

Line 93 Corporation tax rate

Copied from App29 line 88.

Line 94 - Dummy control tax rate

We do not have a dummy price control and as such report zero in this line.

### Block A1 – N1

The outputs of all lines in these blocks are calculated using a formula prepopulated in the data table.

## App27 - PR14 reconciliation - financial outcome delivery incentives summary

Block A No in period revenue ODIs

Block B Revenue adjustment for end of period ODIs. Detailed calculation of the ODIs is in appendix C of the supporting document.

Block C No RCV adjustment ODIs

Block D No in-period revenue ODIs

Block E Allocation of ODI revenue adjustments to price control. Following the guidance the final methodology revenue adjustments have been applied to water and wastewater Network Plus price control except where it is clear that a specific outcome delivery incentive is wholly attributed to water resources or bioresources or retail

Block F No RCV adjustment ODIs

Block G No in-period revenue ODIs.

Block H Output from the revenue feeder model Block I- No RCV adjustment ODIs.

## App28 - Developer services (wholesale)

### IMPORTANT NOTE

#### Basis of preparation of the table

- Please note that grants and contributions received entered in Blocks C and G have been completed through to 2024-25 in accordance with the legal obligations for charging for new connections that are currently in place in Wales. In particular, infrastructure charge receipts have been calculated based on the infrastructure charge which was set by Ofwat at PR09 and income from requisitions has been calculated using the current approach to “offsetting.” The expenditure has been forecast in accordance with the RAG 4.07 definition. Block D requests values related to the redefined infrastructure charge which are all zero as we do not have a redefined infrastructure charge.
- The revenue correction inputs entered in Blocks I and J have been completed through to 2024-25 using the current approach to charging and levels of charges for new connections.

#### Overview of the table

The table contains information from WS3 – wholesale water properties and population and WWS3 – wholesale wastewater properties and population and reflects expenditure that is reported in WS1 – Wholesale water operating and capital expenditure by business unit and WS2 – Wholesale wastewater operating and capital expenditure by business unit. 2017-18 is the first year that Ofwat have defined and require the value for infrastructure network reinforcement (INR), in the APR Table 2J, such that our historical requisitions expenditure is now split into two parts: ‘INR’ and ‘On-site - Site-specific’. These two are now column headings in Table 2J. The rows in Table 2J give a breakdown of INR between different asset types. The same asset types are used in App28. We have treated ‘network growth schemes’ expenditure separately from INR. Network growth scheme expenditure is included in ‘Other capital expenditure’ in Tables WS1 and WWS1.

#### General Comments

The effect of the disaggregation of expenditure reflecting the redefined approach in England and income reflecting the current approach in Wales has, inevitably, produced anomalies. However, in aggregate the expenditure and income is reasonable. This is shown in the table below:

Table APP28.1 Analysis of expenditure and income for services to developers

	2020-21	2021-22	2022-23	2023-24	2024-25	AMP7 Total
<b>Wholesale</b>						
<b>Wholesale Totex</b>	23.0	23.1	23.2	23.2	23.1	115.6
<b>Wholesale Income</b>	(21.4)	(21.6)	(21.8)	(21.9)	(21.9)	(108.6)
<b>Net Wholesale Totex</b>	1.6	1.5	1.4	1.3	1.2	7.0

#### General Methodology

##### New connections

The new connections activity aligns to the number of new properties entered in WS3 and WWS3 which have been derived from the draft Water Resource Management Plan.

##### Capital income

Capital income has been calculated for blocks C and G have been calculated in line with RAG4.07 (Appendix 1) and the PR19 guidance. The split of income into the categories below took place at the start of this AMP to reflect the PR14 Final Determination and Ofwat’s change in methodology at that time to a “single till” approach. The three APRs published during this AMP provide the best source of

comparable income to inform the forecasting for the next AMP so the forecasts that have been used in this table have been based on 2015-16, 2016-17 and 2017-18 actuals.

#### C7 (Water only) Connection Charges

Connections have been based on the three year average income per connection multiplied by the number of new connections in table WS3 which are based on the draft Water Resource Management Plan published in February 2018. The average charge is inflated by CPI(H) from 2019-20.

#### C8 - G24 Infrastructure charge receipts

The infrastructure charge income presented here is based on the existing methodology for calculation and recovery as there are currently no charging rules for companies wholly or mainly in Wales. The projected infrastructure charge for each year is based on the charge set at PR09. The outturn charge from 2020-21 is inflated by CPI(H). The total income is not a simple calculation of charge x number of new connections as the current calculation takes into account loading units at the connecting property to calculate a rate. Therefore judgement has been used to calculate the expected multiplier of the single charge rate. The water income is based on an average uplift from 2015-16 and 2016-17. The wastewater income was based on the average of more recent years. When multiplied by the number of new connections forecast in WWS3 this produced a more reasonable central estimate of infrastructure charge income in 2020-25 if the current method of charging is maintained.

#### C9 - G25 Requisitioned mains

Requisition income is currently calculated based on the on-site new assets as well as new or replacement-upgrades to local infrastructure. The income from requisitions is also based on an "offset" calculation reflecting expected income from the site in the near future. As the methodology for calculation of the income of requisitioned mains-sewers is still uncertain, the Income for both water and wastewater in 2020-21 has been estimated from the average income for the three years 2015-16 to 2017-18. Future years income has been calculated by inflating the previous year's figure by CPI(H).

#### C10 - G26 Other contributions (price control)

Water - There are no other contributions that are expected for water connections in either this AMP or in AMP7.

Wastewater - Most new connections to the sewer network are constructed and completed by the developers themselves. However there is a charge for technical vetting of the sewers and entering into any sewer adoption agreements. This income is around £1m pa and has been forecast forward based on the average per connection income for the three years 2015-16 to 2017-18 which has been applied to the number of new connections forecast in WWS3. The average income is inflated by CPI(H) from 2019-20. The PR14 final determination allocated income from inspections of new connections and sewer adoption agreements to the price control, which was confirmed in Appendix 1 of RAG 4.07. Therefore this element of income is included in this line through to 2019-20. The clarification of Q and A Q59 published on 22 February 2018 confirmed that this would be treated as Other income (non-price control) in PR19 therefore the calculated figure has been entered in row G26 through to 2019-20 and in row G 28 from 2020-21 to 2024-25.

#### C11 - G27 Diversions

Income from Diversions for both water and wastewater in 2020-21 has been estimated from the average income for the three years 2015-16 to 2017-18. Future years' income has been calculated by inflating the previous years figure by CPI(H).

#### C12 - G28 Other contributions (non-price control)

Other contributions for water and waste include grants received from the Government and organisations towards capital works. There were no grants included in the PR19 final determination. There is a £2m grant towards work that will be completed in this AMP to upgrade the facilities at Llys-yr-Fran reservoir. This is included in 2020-21. No other grants are forecast in the period 2020-21 to 2024-25.

Other income also includes some feasibility work that is undertaken primarily to support enquiries from developers which are not pursued so do not get recorded as part of the other categories in this section. The income from these feasibility studies for both water and wastewater in 2020-21 has been estimated from the average income for the three years 2015-16 to 2017-18. Future years income has been calculated by inflating the previous years' figure by CPI(H).

#### Capital expenditure

The data profile through AMP7 is a result of the combination of inflation and efficiencies. The difference in profile between Water (lines 3 to 6) and Sewerage (lines 19 to 23) is due to different efficiency profiles, which in turn is due to different delivery routes.

The step changes from AMP6 to AMP7 are due mostly to the change in historic unit cost rate between the two periods.

#### Line commentary

Block A Activity forecasts ~ wholesale water service Block A

##### Line 1 Total number of new residential connections

*Total number of new residential connections to a company's area of supply during the report year. This will cover the number of new residential properties added for each year that were previously not connected for water supply. Exclude separation of common services, or other reconnections. This line is copied from WS3 line 14.*

The numbers of new residential water connections are in line with the forecasts used for the draft Water Resources Management Plan published for consultation in February 2018. The figures for 2015-16, 2016-17 and 2017-18 are the numbers reported in the respective APR submission Table 4Q line 14. The 2018-19 figure is the forecast used to inform the calculation of 2018-19 charges. There is a step change in 2019-20 arising from the use of the draft WRMP figures for forecasts. (See the commentary for WS3 for further information).

##### Line 2 Total number of new business connections

*Total number of new business connections to a company's area of supply during the report year. This will cover the number of new business properties added for each year that were previously not connected for water supply. Exclude separation of common services, or other reconnections. This line is copied from WS3 line 13.*

The numbers of new business water connections are in line with the forecasts used for the draft Water Resources Management Plan published for consultation in February 2018. The figures for 2015-16, 2016-17 and 2017-18 are the numbers reported in the respective APR submission Table 4Q line 13. The 2018-19 figure is the forecast used to inform the calculation of 2018-19 charges. There is a step change in 2019-20 arising from the use of the draft WRMP figures for forecasts. (See the commentary for WS3 for further information).

Block B Infrastructure network reinforcement expenditure forecasts ~ wholesale water service  
Lines 3 to 6

We have taken the distribution of expenditure in APR 2J for 2017-18 to be typical and applied it each forecast year to our forecast figure for 'Requisitions' derived using historical unit costs and forecast

new connections figures. We have assumed that the distribution of expenditure in APR 2J for 2017-18, i.e. between 'Infrastructure Network Reinforcement' and 'On-site - Site-specific', and between asset types, is typical and have applied the same distribution to our forecast expenditure. APR18 analysed all expenditure to new or upsized distribution and trunk mains. This has been continued in the other forecasts and is deemed reasonable as there are no known developments or expected expenditure on pumps, small service reservoirs or towers in the period.

**Note** The categories of expenditure in Block B are not currently used to calculate our infrastructure charge.

#### Line 3 Distribution and trunk mains

*Capital expenditure on new or upsized distribution and trunk mains other than defined in 4D.14, 4D.15, and excluding third party capex*

APR18 analysed all expenditure to new or upsized distribution and trunk mains. This has been continued in the other forecasts and is deemed reasonable as there are no known developments or expected expenditure on pumps, small service reservoirs or towers in the period.

#### Line 4 Pumping and storage facilities

*Capital expenditure on new or upgrading of pumps and the installation of small service reservoirs or towers other than defined in 4D.14, 4D.15 and excluding third party capex*

There are no known developments or expected expenditure on pumps, small service reservoirs or towers in the period.

#### Line 5 Other assets

*Any other capital expenditure other than defined in 4D.14, 4D.15, 2J.1 and 2J.2*

There is no "other" forecast expenditure over the period.

#### Line 6 Total infrastructure network reinforcement expenditure for new water connections

*A water undertaker's capital expenditure for the provision of new infrastructure network assets or enhanced capacity in existing infrastructure network assets such as water mains, tanks, service reservoirs and pumping stations, in consequence of new connections and-or new developments. This expenditure relates solely to network reinforcement works that are needed on a water undertaker's existing network assets beyond the nearest practicable point where the connection to the water undertaker's network has, or will be made. Capital expenditure in this line should be the same categories of expenditure that was used to calculate a water undertaker's infrastructure charges. Calculated.*

#### Block C Grants and contributions received ~ wholesale water service

##### Line 7 – 13

The approach taken to forecasting the income expected from grants and contributions in the period 2020-21 to 2024-25 is detailed in the general methodology at above. The forecasts for 2018-19 and 2019-20 are taken from the current internal business plan.

The income for 2015-16 to 2017-18 are taken from the respective APR tables. The income from new residential connections for 2015-16 and 2016-17 was reported as revenue income in the APRs as was allowed under the RAG4 guidance. However for the purposes of complying with the FD14 wholesale revenue control and for the reconciliation rulebook these were treated as developer services income within the "single till."

#### Line 7 Connection charges (s45)

*Total contributions received from developer for service connection charges for installing a new service pipe and meter (Water Industry Act s45).*

**Line 8 Infrastructure charge receipts (s146)**

*Total infrastructure charges received in the year for new connections. This reflects a contribution to the costs of enhancing the local water network (Water Industry Act s146).*

**Line 9 Requisitioned mains (s43, s55 and s56)**

*Total contributions received from developers to requisition a new water main (Water Industry Act s43, 55 and 56).*

**Line 10 Other contributions (price control)**

*Total other contributions received from organisations towards the construction of specific capital projects which were included in the price control.*

**Line 11 Diversions (s185)**

*Total contributions received from local authorities, highway authorities and private companies to divert water mains (Water Industry Act s185). Contributions from local and highway authority schemes under the New Roads and Street Works Act 1991 should be excluded and reported in App28 line 12.*

**Line 12 Other contributions (non-price control)**

*Total other contributions received from organisations towards the construction of specific capital projects which were not included in the price control.*

**Line 13 Total grants and contributions ~ wholesale water service**

*The overall total value of grants and contributions for the water service (sum of App28 lines 10 to 15).*

**Block D Infrastructure charges - adopted assets**

**Line 14 Total value of income offset allowances included within a company's redefined water infrastructure charge**

*The total value of income offset allowances included within a company's redefined water infrastructure charge. This reflects a revision to our Charges Scheme Rules which requires any income offset to be made against infrastructure charges in recognition of revenue likely to be received by the relevant undertaker from 1 April 2020 onwards for the provision of supplies of water to the premises connected. We published our final rules New connections charges for the future - England in November 2017 covering this requirement.*

As the legislation concerning infrastructure charges has yet to be redefined for Wales, we are unable to offer income offsets on the infrastructure charge.

**Line 15 Total value of any discounts included within a company's redefined water infrastructure charge**

*The total value of any discounts that a company has applied to its redefined water infrastructure charge as part of its scheme to improve and promote water efficiency and provide environmental protection through reducing or better control of surface water entering the sewer network.*

The legislation concerning infrastructure charges has yet to be redefined for Wales. Until this change has taken place we are unable to assess the potential value of any discounts that may be offered.

**Line 16 Total value of any adopted water assets**

*The fair value of any adopted water assets acquired at nil cost.*

Water assets adopted as part of Self Lay agreements entail an asset payment being made, therefore they are not adopted at zero cost.

Block E Activity forecasts ~ wholesale wastewater service

Line 17 Residential properties connected during the year

*The number of new residential properties added for each period within the company's sewerage area during the report year. This line is copied from WWS3 line 1.*

The numbers of new residential wastewater connections are in line with the forecasts used for the draft Water Resources Management Plan published for consultation in February 2018. The figures for 2015-16, 2016-17 and 2017-18 are the numbers reported in the respective APR table 4U line 1. The 2018-19 figure is the forecast used to inform the calculation of 2018-19 charges. New connections are uplifted to account for sewerage customers billed by other water companies. The forecast is based on historical information and it is assumed that the future rate remains the same as the historic rate.

(See the commentary for WWS3 for further information)

Line 18 Business properties connected during the year

*The number of new business properties added for each period within the company's sewerage area during the report year. This should be the number of new connections; disconnections and demolished properties should not be netted off. This line is copied from WWS3 line 2.*

The numbers of new business wastewater connections are in line with the forecasts used for the draft Water Resources Management Plan published for consultation in February 2018. The figures for 2015-16, 2016-17 and 2017-18 are the numbers reported in the respective APR table 4U line 2. The 2018-19 figure is the forecast used to inform the calculation of 2018-19 charges. New connections are uplifted to account for sewerage customers billed by other water companies. The forecast is based on historical information and it is assumed that the future rate remains the same as the historic rate.

(See the commentary for WWS3 for further information)

Block F Infrastructure network reinforcement expenditure forecasts ~ wholesale wastewater service  
Lines 19 - 23

We have taken the distribution of expenditure in APR 2J for 2017-18 to be typical and applied it each forecast year to our forecast figure for 'Requisitions' derived using historical unit costs and forecast new connections figures. We have assumed that the distribution of expenditure in APR 2J for 2017-18, i.e. between 'Infrastructure Network Reinforcement' and 'On-site - Site-specific', and between asset types, is typical and have applied the same distribution to our forecast expenditure. APR18 analysed expenditure 49.8:50.2 to foul and combined systems and pumping and storage facilities. Therefore a 50:50 split has been used in the forecast years.

**Note** The categories of expenditure in Block B are not currently used to calculate our infrastructure charge.

Line 19 Foul and combined systems

*Capital expenditure on new or upsized public foul and combined sewers other than defined in 4E.14, 4E.15 and excluding third party capex*

Forecast expenditure in the year has been allocated 50% to foul and combined systems as described above.

Line 20 Surface water only systems

*Capital expenditure on new or upsized surface water only public sewers other than defined in 4E.14, 4E.15 and excluding third party capex*

We do not anticipate any expenditure on surface water only public sewers over the period.

**Line 21 Pumping and storage facilities**

*Capital expenditure on construction of new booster stations and pumps and installation of storage tanks other than defined in 4E.14, 4E.15 and excluding third party capex*

Forecast expenditure in the year has been allocated 50% to pumping and storage facilities as described above.

**Line 22 Other assets**

*Any other capital expenditure other than defined in 4E.14, 4E.15, 2J.5 to 2J.7*

We do not anticipate any expenditure on surface water only public sewers over the period.

**Line 23 Total infrastructure network reinforcement expenditure for new wastewater connections**

*A sewerage undertaker's capital expenditure for the provision of new infrastructure network assets or enhanced capacity in existing infrastructure network assets such as sewers and pumping stations, in consequence of new connections and-or new developments. This expenditure relates solely to network reinforcement works that are needed on a sewerage undertaker's existing network assets beyond the nearest practicable point where the connection to the sewerage undertaker's network has, or will be made. Capital expenditure in this line should be the same categories of expenditure that was used to calculate a sewerage undertaker's infrastructure charges.*

Calculated.

**Block G Grants and contributions received ~ wholesale wastewater service**

Lines 24-29

The approach taken to forecasting the income expected from grants and contributions in the period 2020-21 to 2024-25 is detailed in the general methodology at above. The forecasts for 2018-19 and 2019-20 are taken from the current internal business plan.

The income for 2015-16 to 2017-18 are taken from the respective APR tables. The income from new residential connections for 2015-16 and 2016-17 was reported as revenue income in the APRs as was allowed under the RAG4 guidance. However for the purposes of complying with the FD14 wholesale revenue control and for the reconciliation rulebook these were treated as developer services income within the "single till."

**Line 24 Infrastructure charge receipts (s146)**

*Total infrastructure charges received in the year for new wastewater connections. These charges reflect the costs to the company of carrying out network reinforcement of the wastewater network to serve new wastewater connections (Water Industry Act s146).*

**Line 25 Requisitioned sewers (s100)**

*Total contributions received from developers to requisition a new sewer (Water Industry Act s100).*

**Line 26 Other contributions (price control)**

*Total other contributions received from organisations towards the construction of specific capital projects which were included in the price control.*

**Line 27 Diversions (s185)**

*Total contributions received from local authorities, highway authorities and private companies to divert sewers (Water Industry Act s185). Contributions from local and highway authority schemes under the New Roads and Street Works Act 1991 should be excluded and reported in App28 line 28.*

**Line 28 Other contributions (non-price control)**

*Total other contributions received from organisations towards the construction of specific capital projects which were not included in the price control. Also should include Inspection and supervision fees (2.5% of construction cost based on WRC 'Sewers for adoption').*

**Line 29 Total grants and contributions ~ wholesale wastewater service**

*The overall total value of grants and contributions for the wastewater service (sum of App28 lines 26 to 30).*

**Block H Infrastructure charges - adopted assets**

**Line 30 Total value of income offset allowances included within a company's redefined wastewater infrastructure charge**

*Total value of income offset allowances included within a company's redefined wastewater infrastructure charge. This reflects a revision to our Charges Scheme Rules which requires any income offset to be made against infrastructure charges in recognition of revenue likely to be received by the relevant undertaker from 1 April 2020 onwards for the provision of sewerage services to the premises. We published our final rules New connections charges for the future - England in November 2017 covering this requirement.*

As the legislation concerning infrastructure charges has yet to be redefined for Wales, we are unable to offer income offsets on the infrastructure charge.

**Line 31 Total value of any discounts included within a company's redefined wastewater infrastructure charge**

*The total value of any discounts that a company has applied to its redefined wastewater infrastructure charge as part of its scheme to improve and promote water efficiency and provide environmental protection through reducing or better control of surface water entering the sewer network.*

As the legislation concerning infrastructure charges has yet to be redefined for Wales, we are unable to offer income offsets on the infrastructure charge.

**Line 32 Total value of any adopted wastewater assets**

*The fair value of any adopted wastewater assets acquired at nil cost.*

This is based on the average adoption value for 2015-16 to 2017-18 extrapolated forwards based on the new connections volumes.

**Block I Revenue correction inputs – wholesale water services**

**Line 33 Definition of Band A – wholesale water services**

*Definition for connections activity within Band A. This should be defined in terms of type and sizes of connection that fall within the band, for example based on the number of connections per site or annual volume of water supply, where the characteristics and expected costs per connection are broadly similar.*

Band A - refers to all new water connections made by ourselves and includes bespoke designed connections above 63mm in diameter. (Please see note on our approach to completing this section at the top of the commentary for this table.)

**Line 34 Band A – number of properties connected during the year**

*Forecast total number of properties to be connected to water each year, within the company's A banding.*

This is the sum of the values in lines 1 and 2.

Line 35 Band A – number of properties to which contestable services were provided during the year  
*Forecast total number of properties to the company will provide contestable developer water services each year, within the company's A banding.*

This is a forecast of the total number of connections which will be carried out by a self-lay provider. It is based on the historic number of self-lay connections as a proportion of the total number of new connections.

Line 36 Band A – grants and contributions received during the year – for non-contestable works  
*Forecast grants and contributions to be received each year for non-contestable water infrastructure works, within the company's A banding.*

This is calculated by subtracting the data in line 37 from the data in line 17.

Line 37 Band A – grants and contributions received during the year – for contestable works  
*Forecast grants and contributions to be received each year for contestable water developer services, within the company's A banding.*

This is based on the 2018-19 costs to us for connections carried out by SLPs. This is then multiplied by the predicted self-lay connection charge.

Line 38 Band A – forecast contestable services expenditure  
*Forecast expenditure each year for non-contestable water infrastructure works, within the company's A banding.*

(The commentary below refers to the actual line, the data definition refers to a different line)

This is the predicted income from connections carried out by a SLP as opposed to us. It is based on the historic percentage of our new connections income which is from self-lay new connections.

Line 39 Band A – infrastructure expenditure forecast  
*Forecast expenditure each year for contestable water developer services, within the company's A banding.*

(The commentary below refers to the actual line, the data definition refers to a different line)

Infrastructure costs have been separated out into section B below.

Line 40 Band A – forecast revenue per connection – non-contestable works  
*Forecast revenue per connection for non-contestable water infrastructure works, within the company's A banding. Calculated from previous rows.*

Calculation.

Line 41 Band A – forecast revenue per connection – contestable works  
*Forecast revenue per connection for contestable water developer services, within the company's A banding. Calculated from previous rows.*

Calculation.

Line 42  
*Definition for connections activity within Band B. This should be defined in terms of type and sizes of connection that fall within the band, for example based on the number of connections per site or annual volume of water supply, where the characteristics and expected costs per connection are broadly similar.*

Band B refers to Infrastructure charges levied as a result of new connections and developments. These are the infrastructure charges set by Ofwat in the PR09 Final Determination. (Please see note on our approach to completing this section at the top of the commentary for this table.)

Line 42 Definition of Band B – wholesale water services

*Forecast total number of properties to be connected to water each year, within the company's B banding.*

This is the sum of the values in lines 1 and 2.

Line 43 Band B – number of properties connected during the year

*Forecast total number of properties to be connected to water each year, within the company's B banding.*

This is the sum of the values in lines 1 and 2.

Line 44 Band B – number of properties to which contestable services were provided during the year

*Forecast total number of properties to the company will provide contestable developer water services each year, within the company's B banding.*

All network reinforcement works are non-contestable, therefore this is zero.

Line 45 Band B – grants and contributions received during the year – for non-contestable works

*Forecast grants and contributions to be received each year for non-contestable water infrastructure works, within the company's B banding.*

Under the current legislation income for network reinforcement comes through the general infrastructure charges and, where works are as a result of a specific development, as part of the requisition charges. The requisition cost has been apportioned based on the percentage of the requisition costs which relate to network reinforcement.

Line 46 Band B – grants and contributions received during the year – for contestable works

*Forecast grants and contributions to be received each year for contestable water developer services, within the company's B banding.*

All network reinforcement works are non-contestable, therefore this is zero.

Line 47 Band B – forecast contestable services expenditure

*Forecast expenditure each year for non-contestable water infrastructure works, within the company's B banding.*

(The commentary below refers to the actual line, the data definition refers to a different line)

All network reinforcement works are non-contestable, therefore this is zero.

Line 48 Band B – infrastructure expenditure forecast

*Forecast expenditure each year for contestable water developer services, within the company's B banding.*

(The commentary below refers to the actual line, the data definition refers to a different line)

This is equal to our forecast total infrastructure network reinforcement expenditure reported in line B6.

Line 49 Band B – forecast revenue per connection – non-contestable works

*Forecast revenue per connection for non-contestable water infrastructure works, within the company's B banding. Calculated from previous rows.*

Calculated.

Line 50 Band B – forecast revenue per connection – contestable works

*Forecast revenue per connection for contestable water developer services, within the company's B banding. Calculated from previous rows.*

Calculated.

Line 51 Definition of Band C – wholesale water services

*Definition for connections activity within Band C. This should be defined in terms of type and sizes of connection that fall within the band, for example based on the number of connections per site or annual volume of water supply, where the characteristics and expected costs per connection are broadly similar.*

Band C is Water Requisitions - this refers to where a main is laid to provide a supply to a new development all types and sizes are covered in this band. (Please see note on our approach to completing this section at the top of the commentary for this table.)

Line 52 Band C – number of properties connected during the year

*Forecast total number of properties to be connected to water each year, within the company's C banding.*

This is a proportion of the sum of the values in lines 1 and 2, based on our historic splits between water mains installed as a result of a requisition, and those installed without an associated requisition.

Line 53 Band C – number of properties to which contestable services were provided during the year

*Forecast total number of properties to the company will provide contestable developer water services each year, within the company's C banding.*

This is the forecast number of new connections carried out in total, less an estimate of the number of new water connections carried by Self Lay Providers (SLPs).

Line 54 Band C – grants and contributions received during the year – for non-contestable works

*Forecast grants and contributions to be received each year for non-contestable water infrastructure works, within the company's C banding.*

This is a proportion of the income we receive for requisition schemes. Part of the income on requisition schemes funds network reinforcement linked to a development, this income has therefore been removed from the income on this line, but is still reported under line C9.

Line 55 Band C – grants and contributions received during the year – for contestable works

*Forecast grants and contributions to be received each year for contestable water developer services, within the company's C banding.*

For Self-lay requisitions (contestable schemes) we request a pre-development payment from the developer to cover our costs should the scheme not progress. Once the scheme has been completed then the payment is refunded in full. As such the net income for contestable works will be £0.

Line 56 Band C – forecast contestable services expenditure

*Forecast expenditure each year for non-contestable water infrastructure works, within the company's C banding.*

(The commentary below refers to the actual line, the data definition refers to a different line)

This is the total expenditure on requisition schemes which have been carried out by a third party. It is based on the historic percentage of our total expenditure which has related to self-lay schemes. This includes the value of any asset payments made to the SLP within the year. It also includes our costs for works which the SLP did not wish to or could not undertake.

Line 57 Band C – infrastructure expenditure forecast

*Forecast expenditure each year for contestable water developer services, within the company's C banding.*

(The commentary below refers to the actual line, the data definition refers to a different line)

Infrastructure costs have been separated out into section B above.

**Line 58 Band C – forecast revenue per connection – non-contestable works**

*Forecast revenue per connection for non-contestable water infrastructure works, within the company's C banding. Calculated from previous rows.*

Calculation.

**Line 59 Band C – forecast revenue per connection – contestable works**

*Forecast revenue per connection for contestable water developer services, within the company's C banding. Calculated from previous rows.*

Calculation.

**Lines 60 -77**

*Definition for connections activity within Band D. This should be defined in terms of type and sizes of connection that fall within the band, for example based on the number of connections per site or annual volume of water supply, where the characteristics and expected costs per connection are broadly similar.*

Band D and E have not been used.

**Line 78 Definition of Band A – wholesale wastewater services**

*Definition for connections activity within Band A. This should be defined in terms of type and sizes of connection that fall within the band, for example based on the number of connections per site or annual volume of water supply, where the characteristics and expected costs per connection are broadly similar.*

Band A is New Connections - This is the charge for new connections work, including vetting, for connection of new properties to the wastewater network. (Please see note on our approach to completing this section at the top of the commentary for this table.)

**Line 79 Band A – number of properties connected during the year**

*Forecast total number of properties to be connected to wastewater each year, within the company's A banding.*

This is the forecast total number of new properties connected by us within the year. This is the sum of the values in lines 17 and 18.

**Line 80 Band A – number of properties to which contestable services were provided during the year**

*Forecast total number of properties to the company will provide contestable developer wastewater services each year, within the company's A banding.*

This is the same as the value in line 79. As all new sewer connections are undertaken by developers, all are contestable.

**Line 81 Band A – grants and contributions received during the year – for non-contestable works**

*Forecast grants and contributions to be received each year for non-contestable wastewater infrastructure works, within the company's A banding.*

As all sewer connections are undertaken by the developer, there are no non-contestable connections. As such there is no income received.

**Line 82 Band A – grants and contributions received during the year – for contestable works**

*Forecast grants and contributions to be received each year for contestable wastewater developer services, within the company's A banding.*

As all sewer connections are undertaken by the developer, all income relates to contestable works.

Line 83 Band A – forecast contestable services expenditure

*Forecast expenditure each year for non-contestable wastewater wastewater infrastructure works, within the company's A banding.*

(The commentary below refers to the actual line, the data definition refers to a different line)

This is based on the average cost per connection between 2015-16 and 2017-18 extrapolated forwards based on the forecast new connections volumes.

Line 84 Band A – infrastructure expenditure forecast

*Forecast expenditure each year for contestable wastewater developer services, within the company's A banding.*

(The commentary below refers to the actual line, the data definition refers to a different line)

Infrastructure costs have been separated out into section B below.

Line 85 Band A – forecast revenue per connection – non-contestable works

*Forecast revenue per connection for non-contestable wastewater infrastructure works, within the company's A banding. Calculated from previous rows.*

Calculated.

Line 86 Band A – forecast revenue per connection – contestable works

*Forecast revenue per connection for contestable wastewater developer services, within the company's A banding. Calculated from previous rows.*

*Infrastructure costs have been separated out into section B below.*

Calculated.

Line 87 Definition of Band B – wholesale wastewater services

*Definition for connections activity within Band B. This should be defined in terms of type and sizes of connection that fall within the band, for example based on the number of connections per site or annual volume of water supply, where the characteristics and expected costs per connection are broadly similar.*

Band B refers to Infrastructure charges levied as a result of new connections and developments.

These are the infrastructure charges set by Ofwat in the PR09 Final Determination. (Please see note at the top of the commentary for this table.)

Line 88 Band B – number of properties connected during the year

*Forecast total number of properties to be connected to wastewater each year, within the company's B banding.*

This is the forecast total number of new properties connected by us within the years. This is the sum of the values in lines 17 and 18.

Line 89 Band B – number of properties to which contestable services were provided during the year

*Forecast total number of properties to the company will provide contestable developer wastewater services each year, within the company's B banding.*

All network reinforcement works are non-contestable, therefore this is zero.

Line 90 Band B – grants and contributions received during the year – for non-contestable works

*Forecast grants and contributions to be received each year for non-contestable wastewater infrastructure works, within the company's B banding.*

Under the current legislation income for network reinforcement comes through the general infrastructure charges and, where works are as a result of a specific development, as part of the requisition charges. The requisition cost has been apportioned based on the percentage of the requisition costs which relate to network reinforcement.

Line 91 Band B – grants and contributions received during the year – for contestable works

*Forecast grants and contributions to be received each year for contestable wastewater developer services, within the company's B banding.*

All network reinforcement works are non-contestable, therefore this is zero.

Line 92 Band B – forecast contestable services expenditure

*Forecast expenditure each year for non-contestable wastewater infrastructure works, within the company's B banding.*

(The commentary below refers to the actual line, the data definition refers to a different line)

All network reinforcement works are non-contestable, therefore this is zero.

Line 93 Band B – infrastructure expenditure forecast

*Forecast expenditure each year for contestable wastewater developer services, within the company's B banding.*

(The commentary below refers to the actual line, the data definition refers to a different line)

This is equal to our forecast total infrastructure network reinforcement expenditure reported in line 23.

Line 94 Band B – forecast revenue per connection – non-contestable works

*Forecast revenue per connection for non-contestable wastewater infrastructure works, within the company's B banding. Calculated from previous rows.*

Calculated.

Line 95 Band B – forecast revenue per connection – contestable works

*Forecast revenue per connection for contestable wastewater developer services, within the company's B banding. Calculated from previous rows.*

Calculated.

Line 96 Definition of Band C – wholesale wastewater services

*Definition for connections activity within Band C. This should be defined in terms of type and sizes of connection that fall within the band, for example based on the number of connections per site or annual volume of water supply, where the characteristics and expected costs per connection are broadly similar.*

Band C covers all works associated with requisitions. (Please see note on our approach to completing this section at the top of the commentary for this table.)

Line 97 Band C – number of properties connected during the year

*Forecast total number of properties to be connected to wastewater each year, within the company's C banding.*

This is based on the number of properties for which we receive an application for a sewer requisition in a year.

Line 98 Band C – number of properties to which contestable services were provided during the year

*Forecast total number of properties to the company will provide contestable developer wastewater services each year, within the company's C banding.*

We only carry out requisitions for wastewater services where it is either required to carry out network reinforcement (see section B above) or where it is required to use our statutory land entry powers. As such there are no contestable works associated with wastewater requisitions.

Line 99 Band C – grants and contributions received during the year – for non-contestable works  
*Forecast grants and contributions to be received each year for non-contestable wastewater infrastructure works, within the company's C banding.*

This is a proportion of the income we receive for requisition schemes. Part of the income on requisition schemes funds network reinforcement linked to a development, this income has therefore been removed from the income on this line, but is still reported under line 25.

Line 100 Band C – grants and contributions received during the year – for contestable works  
*Forecast grants and contributions to be received each year for contestable wastewater developer services, within the company's C banding.*

We only carry out requisitions for wastewater services where it is either required to carry out network reinforcement (see section B above) or where it is required to use our statutory land entry powers. As such there are no contestable works associated with wastewater requisitions and no associate income.

Line 101 Band C – forecast contestable services expenditure

*Forecast expenditure each year for non-contestable wastewater infrastructure works, within the company's C banding.*

(The commentary below refers to the actual line, the data definition refers to a different line)

We only carry out requisitions for wastewater services where it is either required to carry out network reinforcement (see section B above) or where it is required to use our statutory land entry powers. As such there are no contestable works associated with wastewater requisitions.

Line 102 Band C – infrastructure expenditure forecast

*Forecast expenditure each year for contestable wastewater developer services, within the company's C banding.*

(The commentary below refers to the actual line, the data definition refers to a different line)

Infrastructure costs have been separated out into section B above.

Line 103 Band C – forecast revenue per connection – non-contestable works

*Forecast revenue per connection for non-contestable wastewater infrastructure works, within the company's C banding. Calculated from previous rows.*

Calculated.

Line 104 Band C – forecast revenue per connection – contestable works

*Forecast revenue per connection for contestable wastewater developer services, within the company's C banding. Calculated from previous rows.*

Calculated.

Line 105 – 122

*Definition for connections activity within Band D. This should be defined in terms of type and sizes of connection that fall within the band, for example based on the number of connections per site or annual volume of water supply, where the characteristics and expected costs per connection are broadly similar.*

Band D and E have not been used.

## App29 - Wholesale tax

### Assumptions

The following assumptions have been made in relation to App 29:

1. The corporation tax rate will be 17% for AMP 7 (in line with currently enacted rates).
2. The capital allowances regime will continue to apply throughout AMP 7 and that this will not be replaced by an alternative system e.g. to provide relief for capital expenditure based on the depreciation included in the statutory accounts.
3. Capital allowances will be disclaimed to eliminate trading losses carried forward for the periods up to and including the year ending 31 March 2020 in order to calculate the capital allowances balances at lines 1 -12 (we are adopting this approach following the restrictions on the use of trading losses carried forward which were introduced from 1 April 2017).
4. We assume that the capital allowances methodology and adjustments agreed by the UK Water Industry with HMRC in relation to the treatment of expenditure on operational structures at treatment works will remain unchanged from the current position during AMP 7.
5. The company will continue to receive full relief for its interest costs under the 'Corporate Interest Restriction' reforms (which applied from 1 April 2017).
6. The recognition of infrastructure charges and requisitions income in the statutory accounts will remain unchanged (i.e. recognised as deferred income and released to the income statement over 80 years) following the implementation of IFRS 15. In particular, we assume that IFRS 15 will not require them to be recognised in the income statement on a receipts basis, and that no prior period adjustment will be required in the accounts (with a related tax adjustment).
7. Fixed asset additions in AMP 7 do not include any assets which are to be adopted from customers (which are required to be recognised in accordance with IFRIC 18).
8. There will not be any expenditure which will be eligible for Enhanced Capital Allowances in AMP 7 as **the 2018 Budget announced that the regime will end on 31 March 2020. we are unable to assess whether the expenditure will qualify under the Energy or Water Technology Lists at this stage. Note details of suppliers and model numbers are required etc. for an assessment to be made as to whether an asset qualifies under the Energy Technology List.**
9. Disposals of capital assets will be negligible, as will be any accounting profit or loss, or chargeable gain or loss for tax purposes.
10. We will not receive any tax credits under the R and D Expenditure Credit regime as we are unable to make an assessment as to whether any future projects will meet the detailed requirements of the regime at this stage.
11. We have assumed that disallowable expenditure will be £200k per annum (in line with the position in recently submitted tax computations).
12. We have assumed that any accounting and tax changes arising from the implementation IFRS 16 (leases) will be negligible.

### Line commentary

Lines 1 - 6 Brought forward capital allowance pool – General 18%

*Balance carried forward on the capital allowances pool as at base year balance sheet date capital assets with a UEL of less than 25 years.*

The general pool capital allowances balances at 31 March 2020 have been calculated using Alphatax, the commercial software which we use to file the company's corporation tax computations with HMRC. We have prepared draft corporation tax computations for the years: 31 March 2018, 2019 and 2020 on Alphatax. The tax computations for the year ended 31 March 2018 use the financial information in our statutory accounts, and the computations for the two later years use the financial projections from our business plan. For each of the three years we have estimated the proportion of capital expenditure which will be general pool, special rate pool, deferred revenue expenditure and non-qualifying for capital allowances by taking an average from the submitted corporation tax

computations for the three years ended 31 March 2017. **The calculations also now incorporate Structures and Buildings Allowances following the changes in Budget 2018.**

The company has adopted a policy of disclaiming general pool capital allowances to eliminate carried forward tax losses (whose use is now restricted following the corporate tax loss reforms). The general pool balances stated in lines 1 – 4 include disclaimed capital allowances (and are therefore higher than had the capital allowances been claimed).

We have taken the total general pool balance forecast in our tax computation at 31 March 2020 (which is for the business as a whole) and apportioned this over the 4 wholesale price controls using the RCVs of each price control at 31 March 2020, populating lines 1 – 4 with the amounts for each price control.

Line 5 is a “dummy control” line and has therefore has not been populated.

Line 6 is a summation of lines 1 – 5 and equals the general pool balance in the forecast corporation tax computation for the year ending 31 March 2020.

Lines 7 - 12 Brought forward capital allowance pool – Long life ~~8~~6%

*Brought forward capital allowance pool – Long life 8%*

The special rate (long life) pool capital allowances balances at 31 March 2020 have been calculated in an identical manner using the draft corporation tax computations for the years: 31 March 2018, 2019 and 2020 on Alphatax. **These balances have been updated to reflect the fact that a 6% writing down allowance will apply from April 2019 following the changes in the 2018 Budget.**

We have taken the total special rate-long life asset pool balance forecast in our tax computation at 31 March 2020 (which is for the business as a whole) and apportioned this over the 4 wholesale price controls using the RCVs of each price control at 31 March 2020, populating lines 7 – 10 with the amounts for each price control.

Line 11 is a “dummy control” line and has therefore has not been populated.

Line 12 is a summation of lines 7 – 11 and equals the special rate-long-life pool balance in the forecast corporation tax computation for the year ending 31 March 2020.

**Lines 13 - 18 Brought forward capital allowance pool – structures and buildings 2%**

*Brought forward capital allowance pool – Structures and buildings 2%*

**The structures and buildings pools have been calculated at 31 March 2020 by reanalysing expenditure which had previously been treated as non-qualifying, but which will now qualify for the Structures and Buildings Allowances, following the changes made in the 2018 Budget. We have forecast the total balance on the pool at 31 March 2020 and apportioned this over the 4 wholesale price controls using the RCVs of each price control at 31 March 2020.**

Lines 19 – 53 New capital expenditure

*New capital expenditure*

In order to calculate the percentages in these lines of the tables our capital allowances advisers Chandler KBS (CKBS) undertook an analysis of the capital expenditure in our business plan for AMP 7. Firstly, this involved analysing the capital expenditure for each wholesale price control broken down into more than 50 individual investment cases and then determining a “capital allowances profile” for each investment case i.e. the percentages which would qualify for general pool, special rate pool, a full tax deduction in the year, a tax deduction based on depreciation (deferred revenue

expenditure) and non-qualifying expenditure. The capital allowances profiles were determined using CKBS' best estimates, based on the nature of the underlying work in each investment case and their previous analyses of similar schemes. CKBS have been our capital allowances advisers for many years and have accumulated a detailed knowledge of the capital allowances profiles for different types of capital schemes through the work which they have undertaken for us, and for the other water companies they work with.

For each price control, once the capital allowances profiles had been identified for each investment case then these were applied to the forecast expenditure for each investment case for each year of AMP 7. This gave the expenditure which is forecast to qualify for each of the different categories (general pool, special rate pool etc.) by investment case for each year. **This now includes expenditure which will qualify for Structures and Buildings Allowances, which had previously been treated as non-qualifying in our September 2018 submission. The new lines 21, 28, 35, 42 have therefore now been populated with the percentages of expenditure which will qualify for Structures and Buildings Allowances.** The totals of all of the expenditure for each category (general pool, special rate pool etc.) were then aggregated for each price control by year, and the relevant percentages then calculated for each year which are shown in lines 19-53 (note lines 25, 24, 32 and 46 are totals of the 5 lines above and add-up to 100%).

In preparing the percentages in App 29, CKBS has included the impact of the agreement reached between the water industry and HMRC in relation to the capital allowances treatment of operational structures ("the industry agreement"). Under the industry agreement this requires an adjustment to be made to certain schemes subject to the agreement to reallocate a proportion of the general pool expenditure to the special rate pool (5.6% in the case of water treatment works and 15.35% for wastewater treatment works).

Please note that there is a high percentage (37.51%) for non-qualifying expenditure in line 36 (wastewater network plus) for the year ending 31 March 2021. This is because expenditure of £73m in relation to the Llanelli Gowerton programme has been included in our AMP 7 business plan in 2020-21, for regulatory accounting purposes, but is forecast to be incurred prior to 31 March 2020 and therefore has already been taken into account in the capital allowances balances in lines 1-18. Therefore it has been treated as non-qualifying in App 29 in order to avoid double counting. Lines 47 – 53 are "dummy control" lines and therefore have not been populated.

Lines 54–58 P&L expenditure not allowable as a deduction from trading profits

*P&L expenditure not allowable as a deduction from trading profits*

The company has very small amounts of expenditure which is not allowable as a deduction from trading profits. Typically this is approximately £200k per annum and this been used as an estimate for AMP 7 and has been apportioned equally between the 2 largest price controls: water network plus and wastewater network plus i.e. £100k to each price control (lines 55 and 56).

Lines 54 and 57 (water resources and bio resources) have been left blank, as has "dummy control" (line 58).

Lines 59 – 63 P&L expenditure relating to renewals not allowable as a deduction from taxable trading profits

*P&L expenditure relating to renewals not allowable as a deduction from taxable trading profits*

These are nil for us. This is in line with Ofwat's guidance which expects them to be nil, but the lines have been included in the table as a minority of companies have different arrangements with HMRC and might need them.

Lines 64-68 Change in general provisions

*Change in general provisions*

We forecast that there will be minimal movement in the company's general provisions during AMP 7 and therefore these lines are zero.

Lines 69 – 73 Allowable depreciation on capitalised revenue expenditure (infra and non-infra)

*Allowable depreciation on capitalised revenue expenditure (infra and non-infra)*

The corporation tax computations we submit to HMRC do not analyse allowable depreciation for capitalised revenue expenditure by price control as this is not a requirement for HMRC. We therefore asked CKBS to undertake an analysis of the expenditure incurred on capitalised revenue expenditure so called "deferred revenue expenditure" (DRE) for the two years ended 31 March 2017 so that DRE could be broken down by price control. This gave the following percentages by price control: Water resources (1.6%), water network plus (35.4%), wastewater network plus (58.5%) and bio resources (4.5%).

For DRE incurred up to 31 March 2020 we calculated the total depreciation for each year of AMP 7 and then allocated this by price control using the above percentages.

For expenditure incurred in AMP 7 we took the total DRE for each price control, for each year and then calculated the allowable depreciation using the results from CKBS' analysis of historical expenditure – which also gave percentage allocations across the different asset lives used for depreciating DRE (so that accurate forecasts could be made of the future depreciation).

We then aggregated the allowable depreciation for DRE (for expenditure incurred pre-31 March 2020 and for AMP 7 expenditure) and recorded the total deductions in lines 69-72. Line 73 is "dummy control" and has therefore not been populated.

Lines 74-78 Finance lease depreciation

*Finance lease depreciation*

We do not expect to enter into any new finance leases in 2018-19, 2019-20 or AMP 7, and therefore the deductions in these lines of the table are the future depreciation deductions we expect to receive in AMP 7 for finance leases which are present at 31 March 2018.

As our tax computations do not breakdown the finance lease deductions by price control we undertook a detailed reviewed of the expenditure which had previously been finance leased to allocate this between the four wholesale price controls. Once allocated, we then obtained the future depreciation deductions for the finance leased assets within each price control from our internal leasing schedules. These calculate the depreciation of finance leased assets for each year for our financial accounts. Most of our assets which have been finance leased are in the wastewater network plus part of our business. There are no assets in the water resources price control which are subject to finance leases and therefore line 74 contains zeroes, as does line 78 ("dummy control").

Lines 79-83 Grants and contributions taxable on receipt

*Grants and contributions taxable on receipt*

These lines are blank as none of our grants are taxable on receipt, but instead are capitalised as deferred income and taxed as they are released to the profit and loss account (in the case of infrastructure charges and requisitions income), or are netted from capital expenditure (allocated to the capital allowances pools) in other cases. The amortisation (release) of grants-contributions treated as deferred income (i.e. infrastructure charges and requisitions income) is shown in lines 84 - 88.

Lines 84 -88 Amortisation of grants and contributions

*Amortisation of grants and contributions*

As stated above, these lines include the amortisation of grants-contributions treated as deferred income (i.e. infrastructure charges and requisitions income). We have calculated these amounts by

taking details of infrastructure charges and requisitions income in our forecast tax computations in Alphatax at 31 March 2020 and then calculating the amounts which will be released over AMP 7. We then added to this the forecast release of infrastructure charges and requisitions income we expect to receive in AMP 7 from the information in App 28. Infrastructure charges and requisitions income are released over 80 years in our statutory accounts.

We allocated the amounts released between the water network plus and wastewater network plus price controls in the same proportion as the receipts of infrastructure charges and requisitions income per App 28 for AMP 7 i.e. water network plus (44.5%) and wastewater network plus (55.5%). As infrastructure charges and requisitions income relate to the network assets, no amounts have been included for water resources or bio resources at lines 84 and 87 respectively. Similarly line 88 is blank as this is a “dummy control” line.

Lines 89-93 Other adjustments to taxable profits

*Other adjustments to taxable profits*

We are not aware of any other adjustments to taxable profits and therefore these lines are blank.

Lines 94-98 Brought forward losses

*Brought forward losses*

As noted above (lines 1-6) the company disclaims general pool capital allowances to eliminate the carry forward of tax losses. Therefore we do not expect to have any tax losses at 31 March 2020 and these lines are blank.

Line 99 Statutory corporation tax rate

*Statutory corporation tax rate*

We expect the statutory corporation tax rate to be 17% for each of the years in AMP 7 based on currently enacted tax legislation.

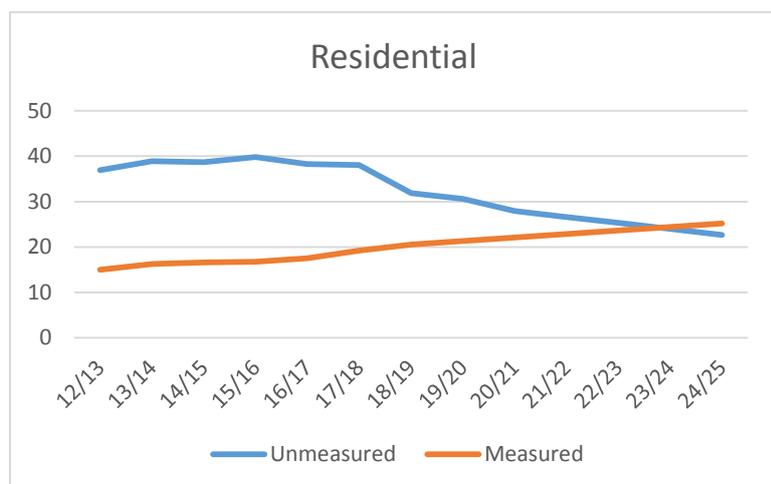
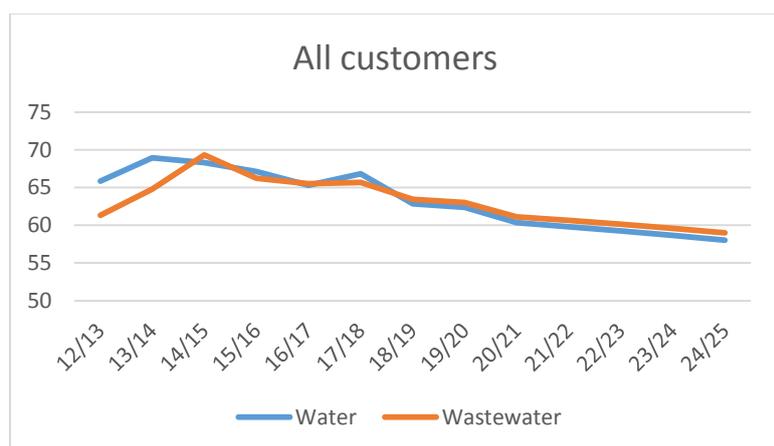
## App30 - Void properties

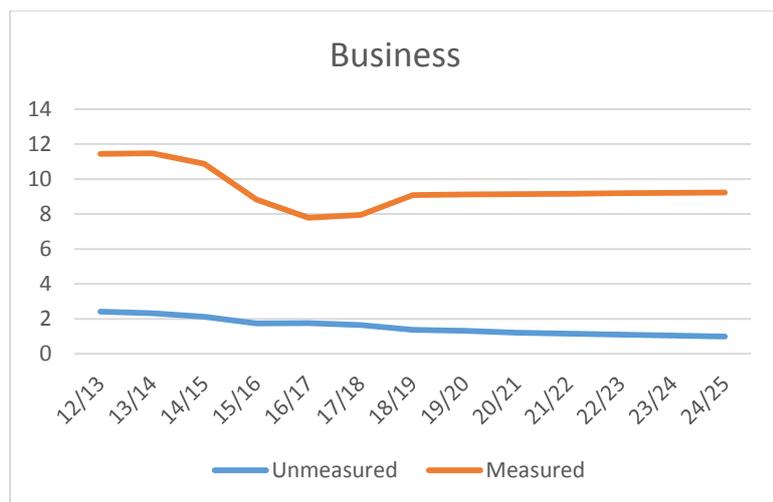
### Overview of the table

The table shows the number of properties connected to the network but not charged as they are not occupied. This table is required to inform stronger and more targeted incentives in relation to voids. It provides the data underpinning the performance commitment on voids and is a component in the calculation of billed properties presented in tables WS3 Wholesale water properties and population and WWS3 Wholesale wastewater properties and population. The data presented is both historical and forecast levels to allow Ofwat to compare companies using consistent data. The data may also be used as part of the retail cost assessment work.

### General Comments

The graphs below show the historical and forecast number of voids showing the overall decline in the total number of voids over the period, resulting from our focus on these properties. The residential trends show the strong decrease in unmeasured void properties from the targetting of unmeasured customers, the increase in voids in metered residential customers reflect the increase in the number of metered customers from new connections (which are all metered) and meter optants. The target is to ensure that the proportion of voids in measured customers does not rise





**Line 1 Number of void properties ~ residential**

*Average total number of residential properties (as defined in line 1 of APR table 4A), within the supply area, which are connected for either a water service only, a wastewater service only or both services but do not receive a charge, as there are no occupants. This should not include properties that do not receive a bill because it would be uneconomical to do so. Note that a property connected for both services that is not occupied, only counts as one void property.*

Historical voids are as reported in June Returns / APR.

Forecast voids have been forecast based on information presented in the DWRMP and our PR19 void reduction programme.

**Line 2 Number of void properties ~ business**

*Average total number of business properties (as defined in line 1 of APR table 4A), within the supply area, which are connected for either a water service only, a wastewater service only or both services but do not receive a charge, as there are no occupants. This should not include properties that do not receive a bill because it would be uneconomical to do so. Note that a property connected for both services that is not occupied, only counts as one void property.*

Historical voids are as reported in June Returns / APR.

Forecast voids have been forecast based on information presented in the DWRMP and our PR19 void reduction programme.

## App31 - Past performance

### Line 1 - Stage 1 complaints received

*Total number of written complaints received from residential and business customers. The definition should use the CCWater guidance on complaint handling.*

Data for 2015-16 to 2017-18 has been populated based on numbers previously reported to CCWater and Ofwat. Data for 2018-19 and 2019-20 are based on forecasts of the number of complaints. The number of complaints reduced significantly in 2017-18 due to the implementation of a number of initiatives to improve our customer service. These include our Customer Led Success programme and 'Own it sort it'.

### Line 2 - Complaints escalated internally to stage 2

*Total number of complaints not resolved at stage 1 and escalated internally to stage 2. The definition should use the CCWater guidance on complaint handling*

Data for 2015-16 to 2017-18 has been populated based on numbers previously reported to CCWater and Ofwat. Data for 2018-19 and 2019-20 are based on forecasts of the number of complaints. The number of complaints reduced significantly in 2017-18 due to the implementation of a number of initiatives to improve our customer service. These include our Customer Led Success programme and 'Own it sort it'.

### Line 3 - Complaints referred to CCWater

*Total number of complaints referred to CCWater, as referenced in CCWater's End of Year Complaints and Enquiries report*

Data for 2015-16 to 2017-18 is reported in CCWater's "Complaints to Water Companies England and Wales" report. The forecast number of complaints is based on historical analysis and forecast future improvements.

### Line 4 - Investigations opened by CCWater

*Total number of investigations opened by CCWater against companies, as referenced in CCWater's End of Year Complaints and Enquiries report.*

Data for 2015-16 to 2017-18 is based on previously reported data to CCWater and Ofwat. Forecast performance is based on 2017-18 performance and continual improvement.

### Line 5 - Complaints investigated by Ofwat or WATRS

*Total number of customer complaints where a case has been opened and formally investigated by Ofwat or WATRS*

Data for 2015-16 to 2017-18 is based on the number of formal investigations. Data for 2018-19 and 2019-20 is based on historical evidence and forecast improvement.

### Line 6 - Total number of major incidents

*Number of major incidents. A major incident is defined as a category 1 event by the EA-NRW or a major water quality event by the DWI.*

There has been no major water quality events between 2015-16 and 2017-18. Two category 1 pollution incidents the period. Data provided is for the calendar year in line with the NRW. Detail information on the major events are in Appendix E of the supporting document submitted with the Reconciliation Rulebook in July. Data for 2018-19 and 2019-20 are our forecast performance levels.

### Line 7 - Number of category 1 and 2 serious pollution incidents

*Total number of category 1 and 2 pollution incidents defined by EA-NRW as follows - The total number of serious pollution incidents (categories 1 and 2) in a calendar year which overlaps with the greater part of the report year, emanating from a discharge or escape of a contaminant from a*

## Welsh Water Appointed Business Plan Table Commentaries

company sewerage asset affecting the water environment. This does not include incidents impacting on air or land. Incidents affecting amenity of the water environment, e.g. Bathing Waters, are included. This does not include pollution incidents from transferred-adopted private pumping stations or transferred-adopted private rising mains (transferred in 2016). Pollution incidents attributed to the clean water distribution system and water treatment works are not included in this serious pollution incidents sewerage definition. Assets included in the sewerage service are:

- sewage treatment works;
- foul sewers, including private sewers transferred to the water companies in Oct 2011 (used in the EPA from 1 Jan 2016);
- combined sewer overflows;
- rising mains;
- pumping stations;
- storm tanks;
- surface water outfalls;
- other.

This is not an exhaustive list. The 'other' category is an optional categorisation used in the Environment Agency National Incident Recording System (NIRS) database for recording incidents where the incident source does not fit in any of the other categories. It is generally used very infrequently but is used occasionally.

Data provided is for the calendar year in line with the NRW reporting. An overview of historical incidents are in appendix E of the supporting document submitted with the Reconciliation Rulebook in July. Data for 2018-19 and 2019-20 are our forecast performance levels.

Change to previously submitted numbers: The Pollution Category numbers in the July submission included both Water and Waste pollution incidents, the definition stated that these lines should only include pollution incidents from Waste water Assets, the number has therefore been updated. 2018-19 and 2019-20 were correct in the July submission.

Originally provided data in the July 2018 reconciliation rule book

C	Compliance with Environment Agency/National Resources Wales statutory requirements	Units	DPs	2015-16	2016-17	2017-18
7	Number of category 1 & 2 serious pollution incidents	nr	0	2	3	3
8	Number of category 3 pollution incidents	nr	0	110	111	112

Corrected Data provided in the September 2018 PR19 submission

C	Compliance with Environment Agency/National Resources Wales statutory requirements	Units	DPs	2015-16	2016-17	2017-18
7	Number of category 1 & 2 serious pollution incidents	nr	0	2	2	1
8	Number of category 3 pollution incidents	nr	0	109	105	101

### Line 8 - Number of category 3 pollution incidents

Total number of category 3 pollution incidents defined by EA-NRW as follows - The total number of pollution incidents (category 3) in a calendar year which overlaps with the greater part of the report year, emanating from a discharge or escape of a contaminant from a company sewerage asset affecting the water environment. This does not include incidents impacting on air or land. Incidents affecting amenity of the water environment, e.g. Bathing Waters, are included. This does not include pollution incidents from transferred-adopted private pumping stations or transferred-adopted

## Welsh Water Appointed Business Plan Table Commentaries

*private rising mains (transferred in 2016). Pollution incidents attributed to the clean water distribution system and water treatment works are not included in this serious pollution incidents sewerage definition.*

*Assets included in the sewerage service are:*

- sewage treatment works;
- foul sewers, including private sewers transferred to the water companies in Oct 2011 (used in the EPA from 1 Jan 2016);
- combined sewer overflows;
- rising mains;
- pumping stations;
- storm tanks;
- surface water outfalls;
- other.

*This is not an exhaustive list. The 'other' category is an optional categorisation used in the Environment Agency National Incident Recording System (NIRS) database for recording incidents where the incident source does not fit in any of the other categories. It is generally used very infrequently but is used occasionally.*

Data provided is for the calendar year in line with the NRW reporting. Data for 2018-19 and 2019-20 are our forecast performance levels.

Change to previously submitted numbers: The Pollution Category numbers in the July submission included both Water and Waste pollution incidents, the definition stated that these lines should only include pollution incidents from Waste water Assets, the number has therefore been updated. 2018-19 and 2019-20 were correct in the July submission.

Originally provided data in the July 2018 reconciliation rule book

C	Compliance with Environment Agency/National Resources Wales statutory requirements	Units	DPs	2015-16	2016-17	2017-18
7	Number of category 1 & 2 serious pollution incidents	nr	0	2	3	3
8	Number of category 3 pollution incidents	nr	0	110	111	112

Corrected Data provided in the September 2018 PR19 submission

C	Compliance with Environment Agency/National Resources Wales statutory requirements	Units	DPs	2015-16	2016-17	2017-18
7	Number of category 1 & 2 serious pollution incidents	nr	0	2	2	1
8	Number of category 3 pollution incidents	nr	0	109	105	101

### Line 9 - Discharge permit compliance

*The definition for Discharge Permit Compliance is set out in section 2.3 of the Environment Agency's Water and Sewerage Company Environmental Performance Assessment (EPA) Methodology (version 3), November 2017.*

*Note that the data to be reported relates to compliance with certain numeric consent conditions (specified in the EA's Methodology) at both sewage treatment works and water treatment works in the calendar year which overlaps with the greater part of the report year*

Data for 2015-16 to 2017-18 is reported through the EPA. 2017-18 had an unusual increase in one off compliance failures at STWs primarily associated with dry weather conditions in the year.

Forecast improvement in compliance is expected due to increased monitoring at wastewater treatment works.

**Line 10 - Satisfactory sludge use - disposal**

*For 2017-18 and prior years: Percentage of overall tds production which is determined as satisfactory by the company, but which, as a minimum, is compliant with the Safe Sludge Matrix and with any legal obligations, including the Urban Waste Water Treatment Directive, the Sludge (Use in Agriculture) Regulations and the Environmental Permitting (England and Wales) Regulations 2010. For 2018-19 onwards: Percentage of overall tds production utilised in a compliant manner in the calendar year which overlaps with the greater part of the report year. "Compliant" should be interpreted as compliant with the Sludge (Use in Agriculture) Regulations, the EPR Regulations in so far as they apply to the recycling and-or disposal of sewage sludge containing products and residual wastes, and with the Safe Sludge Matrix.*

Forecast performance of 100% compliance with the bio solids assurance scheme.

**Line 11 - Prosecutions for breach of relevant environmental requirements enforced by EA-NRW**

*The definition for prosecutions is set out in the Environment Agency's enforcement and sanctions policy (ESP). Include only completed prosecutions, not the ongoing cases.*

An overview of prosecutions is provided in Appendix F of the supporting document submitted with the Reconciliation Rulebook in July.

**Line 12 - Enforcement undertakings for breach of relevant environmental requirements from EA-NRW**

*The definition for enforcement undertakings is set out in the Environment Agency's enforcement and sanctions policy (ESP). Only include undertakings accepted by the EA-NRW and not those that have been submitted and are awaiting decision or those that have been rejected*

An overview of the enforcement undertakings is provided in Appendix F of the supporting document submitted with the Reconciliation Rulebook in July.

**Line 13 - Formal cautions for breach of relevant environmental requirements from EA-NRW**

*The definition of formal cautions is set out in the Environment Agency's enforcement and sanctions policy (ESP)*

An overview of formal cautions is provided in Appendix F of the supporting document submitted with the Reconciliation Rulebook in July.

**Line 14 - Formal cautions for breach of drinking water quality requirements**

*Number of cautions related to water quality incidents as defined by DWI.*

There has been no incidents where the DWI have issued a formal caution between 2015-16 and 2017-18.

**Line 15 - Completed prosecutions for breach of drinking water quality requirements**

*Number of successful prosecutions for water quality incidents*

There has been no incidents where the DWI have completed a prosecution between 2015-16 and 2017-18.

**Line 16 - Completed enforcement action taken under the Water Industry Act 1991 and the licence**  
*Total should include section 18 enforcement orders, section 19 undertakings, section 22A financial penalties and section 207 successful prosecutions for false information*

There has been no completed enforcement actions against us under the Water Industry Act 1991 between 2015-16 and 2017-18.

**Line 17 - Completed enforcement action taken under competition law**

*Total should include*

- *Infringement decisions of any competition authority in relation to the Chapter I or II prohibition of the Competition Act 1998 or of Articles 81 or 82 of the Treaty on the Functioning of the European Union*
- *Successful private actions in any court or tribunal in relation to breach of competition law*
- *Prosecution of a company director for the cartel offence under section 188 of the Enterprise Act 2002*
- *Findings of an adverse effect on competition following a market investigation under the Enterprise Act 2002*
- *Undertakings in lieu of a market investigation reference under the Enterprise Act 2002*

**There have been no completed enforcement actions against us under competition law between 2015-16 and 2017-18.**

## App32 – Weighted average cost of capital for the Appointee

In line with Ofwat’s final methodology we agree that financeability should be assessed on a whole company level. We do not believe that it would be appropriate to assume different cost of capital for the water resources, water network plus, wastewater network plus, and bioresources businesses for the purposes of this exercise.

We have used Ofwat’s early view of the cost of capital when compiling the business plan and assessing that the plan is financeable.

Ofwat’s early view of the cost of capital represents a material reduction since PR14. This reduction has been passed on to customers via a reduction in the average residential bill. In order to address consequential financeability issues, the notional dividend policy has also been updated to be consistent with the lower cost of equity. We deem that the business plan is financeable and delivers as a minimum an investment grade credit rating for both the notional and actual companies. Albeit with the resulting credit metrics being on the cusp of financeability under severe stress scenarios with significantly reduced headroom when compared against previous business plans.

We are not proposing different assumptions to those used to derive the early view of WACC for PR19.

We are not assuming any changes to assumptions between the 2020-25 (AMP7) and 2025-2030 (AMP8) periods.

We are not proposing and changes to Ofwat’s early view of WACC between the notional and actual companies.

All assumptions are as per Table 1, Section 4, Appendix 12: Aligning risk and return of Delivering water 2020: Our methodology for the 2019 price review.

### Lines 1 Notional Gearing

#### *Net debt to RCV*

Net debt to RCV the percentage share of debt in the capital structure of the notional company.

### Line 2 Total Market Return (TMR)

#### *Total Market Return (TMR)*

The total yield required by investor to invest in a well-diversified benchmark index.

### Line 3 Risk free rate (RFR)

#### *The Risk Free Rate (RFR)*

The estimated return for investment in an asset with zero risk.

### Line 4 Equity risk Premium (ERP)

#### *The premium over the risk free rate required to invest in equities*

The premium over the risk free rate required to invest in equities. Calculated as the difference between the total market return and the risk free rate. Calculated cells.

### Line 5 Debt Beta

#### *Debt beta*

A measure of undiversifiable risk faced by debt investors in water.

## Welsh Water Appointed Business Plan Table Commentaries

### Line 6 Raw equity beta for listed company comparator

*Raw equity beta estimate for listed company comparator at a gearing consistent with row 7*

A measure of undiversifiable risk faced by geared investors in water, assuming gearing at the notional 60%.

### Line 7 Actual gearing of listed company comparator

*Actual gearing of listed company comparator consistent with line 6, using the definition Net Debt - Enterprise Value*

Gearing consistent with line 6.

### Line 8 Asset beta

*Asset beta, consistent with debt beta assumption in row 5*

A measure of undiversifiable risk faced by un-gearred investors in water, reflecting a non-zero debt beta. Calculated cells.

### Line 9 Re-levered equity beta

*Re-levered beta, consistent with appointee gearing (notional or actual, as applicable)*

A measure of undiversifiable risk faced by geared investors in water, assuming gearing at the notional 60%. Calculated cells.

### Line 10 Overall cost of equity (used in WACC)

*The calculated cost of equity using the capital asset pricing model: risk free rate + (equity risk premium x equity beta)*

An estimate of the return required by equity investors in the notional company. Calculated cells.

### Line 11 Cost of embedded debt

*Average cost of debt embedded in notional company balance sheet*

An estimate of the cost of debt, which reflects historic sector borrowing costs as at 31 March 2020. This line requires data entered to two decimal places, however we have entered the cost of embedded debt to three decimal places being 4.635% for both years. If we had entered 4.64% the overall cost of debt in line 15 would not be consistent with the Ofwat guidance.

### Line 12- Cost of new debt

*Average cost of new debt to notional company over the next AMP*

An estimate of the cost of raising new debt over the period 2020-2025.

### Line 13 - Ratio of embedded to new debt

*Ratio of embedded debt to new debt*

Assumed average ratio of embedded to new debt for the notional company.

### Line 14 - Issuance and liquidity costs

*Issuance and liquidity costs*

An allowance for debt issuance fees and cash balances.

### Line 15 - Overall cost of debt (used in WACC)

*Total cost of debt, including new and embedded debt, weighted: (cost of embedded debt x weighting of embedded debt) + (cost of new debt x weighting of new debt)*

Calculated cells.

Line 16 - WACC ~ vanilla (pre-tax cost of debt and post-tax cost of equity)

*The weighted average cost of capital, expressed using a pre-tax cost of debt and post-tax cost of equity*

Calculated cells.

Line 17 - Tax (marginal rate of corporation tax)

*The marginal rate of corporation tax*

The published corporation tax rate.

Line 18 - WACC ~ fully post-tax

*The weighted average cost of capital, expressed using a post-tax cost of debt and post-tax cost of equity.*

Calculated cells.

Line 19 - Retail margin deduction

*Retail margin deduction*

Deduction to derive a WACC for wholesale operations.

Line 20 - Wholesale WACC

*Wholesale WACC = Appointee WACC - Retail Margin*

Cost of capital allowance which will apply to the wholesale controls. Calculated cells.

Section B – Appointee WACC based on company's actual structure (nominal)

*Duplicates data input for lines 1-20, based on actual rather than notional company structure.*

We are not proposing any changes to Ofwat's early view of WACC between the notional and actual companies.

## Welsh Water Appointed Business Plan Table Commentaries

Line 21 = Line 1  
Line 22 = Line 2  
Line 23 = Line 3  
Line 24 = Line 4  
Line 25 = Line 5  
Line 26 = Line 6  
Line 27 = Line 7  
Line 28 = Line 8  
Line 29 = Line 9  
Line 30 = Line 10

Line 31 = Line 11  
Line 32 = Line 12  
Line 33 = Line 13  
Line 34 = Line 14  
Line 35 = Line 15  
Line 36 = Line 16  
Line 37 = Line 17  
Line 38 = Line 18  
Line 39 = Line 19  
Line 40 = Line 20

## App33 - Wholesale operating leases reclassified under IFRS16

### Line commentary

Line A18, B39, C60, D81, E102: Number of years for discounting

*Number of years for discounting is pre-populated to calculate the discounted value of future lease payments as at 31 March 2020.*

We do not currently own any operating leases that will be reclassified under IFR16 to finance leases.

Line F112: Balance of existing finance leases included on balance sheet

*Balance of existing finance leases included on balance sheet - this should exclude any finance leases reclassified under IFRS16.*

The finance lease balance at 2017-18 agrees back to the amounts included in the Annual Performance Report. In 2024-25 four of the finance leases are terminated hence the significant reduction.