

PR19 Wastewater Services business plan table commentaries

August 2019

Document Change Control:

September submission 2018 – Text in black

*April IAP 2019 – Changes in **red***

*Draft Determination Representations 2019 – Changes
in **blue***

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WWS1 – Wholesale wastewater operating and capital expenditure by business unit

Table Validation Errors

Line 9

There is a validation error in this line: “Totals in Line 9 should equal sum of Totals in Lines 8 and 16 in Bio3”
Bio3 Lines 8 and 16 both include depreciation therefore this check does not appear to be correct.

The Totals of line 6 and line 14 of Bio3 equal the totals in Line 9 for Sludge Treatment and Sludge disposal:

Bio3 - Wholesale wastewater sludge opex											
Sludge treatment opex by treatment type				17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25
A	Sludge treatment type			Total	Total	Total	Total	Total	Total	Total	Total
6	Total before depreciation	£m	3	9.424	7.278	6.019	4.943	5.057	5.245	5.220	5.617
B	Sludge disposal route										
14	Total before depreciation	£m	3	4.667	7.536	7.219	6.643	6.542	6.547	6.488	6.614

WWS1 - Wholesale wastewater operating and capital expenditure by business unit											
				17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25
A	Operating expenditure			Sludge treatment							
9	Total operating expenditure (excluding third party services)	£m	3	9.424	7.278	6.019	4.943	5.057	5.245	5.220	5.617
				Sludge disposal							
9	Total operating expenditure (excluding third party services)	£m	3	4.667	7.536	7.219	6.643	6.542	6.547	6.488	6.614

We have updated our figures in this table to reflect our decisions about areas where we have accepted the draft determination. Detailed commentary is given against individual lines. Some elements of the “General Comments” section are now out of date but we have left this in the document for reference.

An overview of the changes are below;

Line Number	Cost	Total Change	Reason
5	Renewals expensed in year (Infrastructure)	£53.197m	Treatment of investment that is internally allocated to “capex” has changed
12	Maintaining the long term capability of the assets ~ infra	-£53.197m	
14	Other capital expenditure ~ infra	-£58.846m	Reduction in enhancement spend due to acceptance of elements of DD
15	Other capital expenditure ~ non-infra	-£7.837m	

General comments

Wastewater Totex reduces by ~~£2.7m~~ **£1.5m** from 2017-18 to 2024-25. This comprises a ~~£5m~~ **£4m** increase in operating expenditure, a £6m reduction in capital expenditure, £1m increase in contributions and £1m lower pension deficit recovery costs.

Operating Costs increase by ~~£5m~~ **£4m** per annum from 2017-18 to 2024-25. This is impacted by the following:

- Net £2m reduction in the annual power costs by the end of AMP7, (despite 11% Real Price Effect).
- £4m increase in the annual power income (negative opex) figure by the end of AMP7 as a result of new schemes coming on line.

Welsh Water Wastewater Services Business Plan Table Commentaries

- -£5m increase in the annual IRE charge by the end of AMP7, as a result of a change in the mix of work envisaged, which results in a higher proportional opex charge.
- A £4m per annum increase in rates costs as a result of the rates revaluation in 2021-22.
- A net ~~£1.7m~~ **£3.0m** increase per annum in other operating costs, which results from opex from capex relating to the NEP and an increase in principal use opex recharges (~~4.6m~~ **£5.6m**) offset by a number of efficiencies relating to direct labour (£1.2m), Outsourced supplier contracts (£1.3m), support service cost reductions (~~£4m~~ **£3.6m**).
- The annual rate of capital expenditure decreases by £5.6m per annum from 2017-18 to 2024-25. This is impacted by the following:
- Maintenance Capital reduces by £34m per annum by 2024-25 compared to 2017-18. This reflects a £11m per annum capital efficiencies (resulting from a new contract with our capital partners) and completion of a number of significant maintenance investment in AMP 6 (for example the £94m sludge investment programme).

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Table 1 AMP 6 to AMP 7 - Key Movements in Maintenance Spend	£m
1) Capital Efficiencies	(49)
2) Increase Maintenance Expenditure	
Health and Safety Improvements	12
Event Duration Monitoring	38
PFF	19
Continuous/Intermittent Discharges	<u>16</u>
Sub-total	85
3) Decreased Maintenance Expenditure	
WwTW Maintenance	(15)
New development & growth (WW)	(12)
Private sewers & pumping stations	(13)
Sewage pump stations	(18)
Network intermittent discharges (M)	(11)
Sludge schemes	<u>(100)</u>
Sub-total	(169)
4) Changes in Classifications	
Sustainable Drainage Plans	(13)
Sludge Schemes	<u>(5)</u>
Sub-total	(18)
5) Other Movements	2
Total Movement	(149)

Table 2 - AMP 6 to AMP 7 - Key Movements in Other Capital Spend	£m
1) Capital Efficiencies	(58)
2) New Enhancement Investment Cases	
Loughor	94
Sewerage Resilience	18
Other (DWF/EDM)	<u>22</u>
Sub-total	134
3) Decreased/Completed Enhancement Programmes	
Completed Dunnes Lane (Intermittent Discharges) AMP 6	(41)
Completed AMP 6 Continued/Intermittent Discharges (WFD Improvement)	<u>(28)</u>
Sub-total	(69)
4) Increased NEP	73
5) Change in Classification	
Sustainable Drainage Plans	13
Sludge Schemes	<u>5</u>
Sub-total	18
6) Net other movements	(5)
Total Movement	93

Other Capital investments increase by £29m from 2017-18 to 2024-25. This reflects the £93m increase in other capital investment between AMP 6 and AMP 7. The significant movements are detailed below:

Efficiency Programmes

Our operating cost efficiency programme delivers annual savings of £7.8m by 2024-25. The programme is based upon a number of work streams, designed to identify end to end process efficiencies in our waste treatment cycle. Table 3 below summarises the work streams that comprise that end to end process efficiency review:

	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
	£m	£m	£m	£m	£m	£m	£m
Management Restructure	-	347	347	347	347	347	347
Treatment Works Efficiency	154	434	799	1,169	1,519	1,849	2,079
Bio Resources Efficiency	50	150	200	200	200	200	200
Scientific Team Efficiencies	-	100	100	100	100	100	100
Energy Efficiency Schemes	-	200	400	600	1,000	1,200	1,300
Maintenance Efficiency	1,728	3,452	3,557	3,557	3,557	3,557	3,557
Other	150	170	250	250	250	250	250
Water Total	2,082	4,853	5,653	6,223	6,973	7,503	7,833

Our Capital efficiency programme in Wholesale wastewater delivers savings totalling £107m in AMP 7 compared to AMP 6.

The level of efficiency is measured against the AMP 6 outturn, and captures efficiencies relating to improved ways of working, innovation, processes, 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 and 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.

(Line A1-A11)

Assumptions/Judgements made

- 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 'Principal Use' treatment as described in the latest Ofwat guidance. The impact of this is £2.3m in 2017-18 as shown in the following table;

				For the 12 months ended 31 March 2018				
Line description			Units	Sewage collection	Sewage treatment	Sludge		
						Sludge transport	Sludge treatment	Sludge disposal
7	~ Other operating expenditure excluding renewals	PER APR	£m	25.355	29.375	4.723	10.103	4.545
7	~ Other operating expenditure excluding renewals	Principal Use Adjustment	£m	0.855	0.920	0.057	0.325	0.122
7	~ Other operating expenditure excluding renewals	Per WWS1	£m	26.210	30.295	4.780	10.428	4.667

- 2018-19 – 2024-25 were allocated to the price controls based on the same percentage splits as 2017-18 actuals, except where there is a known changes in business practice/structure, in which case a change is justified on the basis that it better reflects the RAG's after the change is made.
- The material example in Waste relates to the treatment of 'Scientific' costs, where as a result of the additional work associated with maintaining BAS compliance, a greater proportion of scientific department costs have been allocated to the sludge price control from 2018-19 onwards.
- Efficiencies in direct cost budgets have been allocated to the departments to which they relate and therefore will be directly allocated to price controls.
- For efficiencies in the support services areas, the impact of these is included in 'Other operating expenditure excluding renewals' (line 7) and allocated to price controls on the basis of support service costs in total.
- Confirmation of the treatment for all years has been agreed with each Head of Department.
- Ampr 6 costs are in out-turn prices and AMP 7 costs are in 2017-18 (CPIH adjusted) prices.

(Lines A5; B1-B19)

- The methodology for creating the capital disclosures in the table is consistent across AMP 6 and AMP 7 in so far as it is driven from an internal model called the 'DG Analysis' model, which builds the capital programme by investment case (which links through to price controls).
- There is considerable movement between investment cases and in the profile of the programme as a whole, a summary of which is provided below.

"Blind" years 2018-19 and 2019-20 - Specific Treatment

- The table follows the treatment in the APR, which splits Enhancement / Maintenance, Infra / Non-Infra at investment case level for year 3 (2017-18) actuals and for the blind years, based on projected spend. Differences in specific cost lines between the APR tables and the data in WWS1 are a consequence of the adoption of the 'Principal Use' accounting treatment as required by Ofwat in the PR 19 Methodology, and also with the £18m of spend on the L2 Driver projects at Loughor, being excluded from WWS1, as it is included in WWS10 as transition spend.

The difference between the Annual Performance Report and WWS1 for 2017-18 is summarised below:

		Sewage collection	Sewage treatment	Sludge			Total
				Sludge transport	Sludge treatment	Sludge disposal	
Figures Declared in 2017/18 APR Table 4K		111.231	148.916	4.930	44.924	5.788	315.789
Line 11	Principal Use Adjustment Opex	0.855	0.919	0.057	0.328	0.122	2.281
Line 13	Principal Use Adjustment Capex	-3.977	-3.869	-0.093	-1.551	-0.679	-10.169
Line 14	Transition Expenditure (L2 Driver)	-15.068	-3.099	0.000	0.000	0.000	-18.167
Figures Declared in 2017/18 WWS1 Table		93.041	142.867	4.894	43.701	5.231	289.734

Forecast years post 2020 - Specific Treatment

- The forecast investment has been primarily based on analysis of customer views / feedback, reviews of historical, current and forecast performance measures and expenditures, analysis of future performance targets, reviews of expenditures identified in high level feasibility reports to meet growth and regulatory challenges and the analysis and optimisation of risks and benefits. Judgement was made as to the base and enhancement splits for proposed investment having regard to Ofwat guidance and price controls.
 - We have allocated 75% of what we had considered to be infrastructure capex to the operating renewals line in AMP7 to be consistent with AMP6.
 - We have taken Infrastructure network reinforcement (INR) to be just the 'off-site' or 'non-site-specific' part of what used to be included in Requisitions expenditure.
 - We have treated 'network growth schemes' expenditure separately from INR. Network growth scheme expenditure is included in 'Other capital expenditure' in Table WWS1.
- The investment programme has been developed using analysis as set out in our investment cases. Projects, schemes and programmes of work associated with the investment cases and associated budgets have been allocated to the expenditure categories and sub-price controls to enable the analysis presented in this table.
- The data within Table WWS1 identifies the total value of the PR19 wastewater programme.
- 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. We have applied the same distribution to our PR19 INR forecast expenditure.

Line A1 - Power

All energy costs, including the climate change levy and the carbon reduction commitment. Any cost savings from power generated internally should be netted off these costs.

Power costs reduce by £2m from 2017-18 to 2024-25. This comprises an 11% (£3m) forecast RPE relating to power based on an external report commissioned by Cornwall), the impact of our energy efficiency initiatives, which will reduce electricity consumption by 6% per annum (£2.1m) and increased renewable energy generation (£3m per year).

The spike in sewerage collection power costs in 2017-18 reflects the abnormal level of pumping station activity resulting from the multiple bouts of wet weather in that year. We anticipate the power consumption to return to more typical levels (similar to 2016-17) in our business plan

Line A2 – Income treated as negative expenditure

Income received from sales which are external to the appointed business and which directly relate to the wastewater processes. It should be input as a negative number.

- *This will include:*
- *Electricity sales from sources such as CHP to external parties.*
- *Electricity sales from back-up generators under the National Grid 'STOR'.*
- *Bio-methane gas sales to the National Grid.*
- *Renewables Obligation Certificates (ROCs) and payments made under the non-domestic RHI and Feed-in Tariff schemes.*
- *Sludge and sludge products such as cake, granules etc. to external parties.*

Power income increases from £3.3m to £7.1m from 2017-18 to 2024-25 (increase of £3.8m). Renewable generation output is forecasted to rise by approximately 45% compared to 2017-18, increasing revenue by £2.4m by 2025. This increase is mainly driven by the commissioning of Five Fords in 2018-19 and COG Moors in 2019-20 advanced anaerobic digestion, increasing gas generation outputs, resulting in higher levels of renewable electricity and gas generation. The full year effect of Five Fords is seen in 2019-20, and from Cog Moors in 2020-21. The renewable generation subsidy is also forecasted to rise, increasing revenue by £0.9m by 2025

The increase in forecasted revenue from 2017-18 to 2018-19 of £0.444m is due to planned recovery of output of existing assets (output of Afan WWTW and Cardiff WWTW) where CHP operation was below target in 2017-18 due to unscheduled maintenance.

Line A3 – Service charges / Discharge Consents

Total cost of service charges by the Environment Agency or Canal and River Trust for discharge permits.

Budget remains static until 2021-22 where we have reflected the change in charging structure that National Resources Wales have signalled their intention to implement. This new methodology follows that recently implemented by the Environment Agency and would increase charges by 23% (£1.02m). This increased level of charges is reflected from 2021-22 until the end of the AMP.

Line A4 – Bulk discharge

Total payments for bulk imports. If a supply is a shared supply and is jointly owned, the costs associated with it should not be reported here but in the appropriate cost line.

We do not have any sewerage main connection agreements and therefore have not used this line.

Line A5- Renewals expensed in year (infrastructure)

Infrastructure Renewals which are expensed rather than capitalised in statutory accounts.

Infrastructure renewals expenditure in AMP 6 is based upon actual spend incurred. For AMP 7 the costs are budgeted on a historic average proportional basis where ~~25%~~ 0% of the costs is estimated to upgrade the assets and is included in line 12 maintaining the long term capability of the assets.

Private sewers costs that have not enhanced the asset have been included in this line with private sewer enhancement costs and adopted pumping stations reported in line 12 and 13.

Our treatment has changed to expense all infrastructure maintenance expenditure in the year in which it occurs.

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
	£m	£m	£m	£m	£m	£m	£m	£m
Private sewers and pumping stations	8.375	7.055	8.413	5.748	5.728	5.709	5.683	5.665
Split								
Line 5: Other operating expenditure- Renewals expensed in year (Infrastructure)	6.230	5.248	6.258	3.877	3.863	3.850	3.832	3.820
Line 12: Maintaining the long term capability of the assets ~ infra	0.881	0.742	0.885	1.292	1.288	1.283	1.277	1.273
Line 13: Maintaining the long term capability of the assets ~ non~infra	1.264	1.065	1.270	0.579	0.577	0.576	0.574	0.572
	8.375	7.055	8.413	5.748	5.728	5.709	5.683	5.665

Line A6 - Renewals expensed in year (non-infrastructure)

Non Infrastructure Renewals which are expensed rather than capitalised in statutory accounts.

We have not expensed any non-infrastructure renewals in our business plan (or in 2017-18 actuals). Our treatment of non-infrastructure maintenance activity is capitalised under IFRS in the APR.

Line A7 – Other operating expenditure excluding renewals

Any other operating costs.

A summary of the line 7 expenditure and the movement year on year is shown below.

Other Expenditure Excluding Renewables (only)							
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
	£'m	£'m	£'m	£'m	£'m	£'m	£'m
Inflation/Deflation allocated							
Manpower	32.93	31.95	31.24	31.05	30.68	30.30	30.30
Chemicals	4.18	4.05	3.80	3.70	3.62	3.56	3.60
Materials	0.86	0.86	0.80	0.78	0.77	0.75	0.74
Transport Charges	5.21	5.19	4.71	4.62	4.57	4.43	4.35
Brought in Services	13.12	13.15	10.84	10.79	12.20	12.81	14.82
Establishment	0.88	0.90	0.83	0.82	0.78	0.78	0.74
Other	-	(0.03)	0.22	0.26	0.25	0.27	0.03
Outsourced Contract Costs	4.26	4.26	3.98	3.90	3.82	3.75	3.87
G&S	24.00	21.10	20.62	20.49	20.32	19.93	19.84
Capital Salaries & Transfers	(8.71)	(8.80)	(8.80)	(8.80)	(8.80)	(8.78)	(8.78)
PU Adjustment	3.93	5.77	6.82	8.04	8.91	8.95	8.61
Total	80.656	78.398	75.056	75.645	77.120	76.750	78.124
Total	80.66	78.40	75.66	76.55	78.18	77.95	79.44
Year on year movement	-	(2.258)	(3.342)	0.589	1.475	(0.370)	1.374
Year on year movement	-	(2.26)	(2.74)	0.89	1.63	(0.23)	1.49

The year on year movements are analysed below:

Other Expenditure Excluding Renewables - Year on year movement							
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
	£'m	£'m	£'m	£'m	£'m	£'m	£'m
Inflation/Deflation allocated	-	(0.98)	(0.71)	(0.19)	(0.37)	(0.38)	0.00
Manpower	-	(0.98)	(0.71)	(0.19)	(0.37)	(0.38)	0.00
Chemicals	-	(0.13)	(0.25)	(0.10)	(0.08)	(0.06)	0.04
Materials	-	0.00	(0.06)	(0.02)	(0.01)	(0.02)	(0.01)
Transport Charges	-	(0.02)	(0.48)	(0.09)	(0.05)	(0.14)	(0.08)
Brought in Services	-	0.03	(2.31)	(0.05)	1.41	0.61	2.01
Establishment	-	0.02	(0.07)	(0.01)	(0.04)	0.00	(0.04)
Other	-	(0.03)	0.25	0.04	(0.01)	0.02	(0.24)
Outsourced Contract Costs	-	0.00	(0.28)	(0.08)	(0.08)	(0.07)	0.12
G&S	-	(2.90)	(0.48) (0.11)	(0.13) (0.14)	(0.17)	(0.39)	(0.09)
Capital Salaries & Transfers	-	(0.09)	0.00	0.00	0.00	0.02	0.00
PU Adjustment	-	1.84	1.05	1.22	0.87	0.04	(0.34)
PU Adjustment		1.84	1.28	1.53	1.03	0.18	(0.22)
Total	-	(2.258)	(3.342)	0.589	1.475	(0.370)	1.374
Total		(2.26)	(2.74)	0.89	1.63	(0.23)	1.49

The significant movements are as follows

- Direct Labour decreases by £2.6m from £32.9m (2018-19) to £30.3m (2024-25) as a result of the operational labour efficiency programme impacting through the AMP. See the commentary on WWS5 for more detail.
- Chemical costs reduce in 2021 as a result of our efficiency programme at treatment works. This is despite £1.8m of incremental chemical costs resulting from Phosphorus removal schemes in the NEP (National Environmental Programme).
- Transport charges decrease in 2020-21 as a result of the replacement cycle of vehicles, which reduced running costs early in new asset lives.
- Brought in services reduces in 2020-21 as a result of our efficiency programme (principally restructuring outsourced contracts to reduce activity levels and margins), but increases again from 2020-21 which is opex from capex relating to the NEP including pass forward flow treatment costs, and Waste Framework Directive costs.
- G&S reduces by ~~£4.2m~~ **£3.8m** over the AMP, which reflects the net impact of the support services efficiency programme, which comprises approximately 50% manpower reductions and 50% reductions in activity levels. This is front loaded to maximise the benefits throughout the AMP 7 period. The 2019-20 saving comprise the majority of the cost efficiencies relating to targeted activity level reductions in support services, with some headcount reductions. The savings from 2020 onwards largely relate to manpower related savings which require systems improvements and changes to ways of working to achieve. See the commentary on WWS5 for more detail.
- Principal Use adjustments reflect a proportional charge relating to the use of an asset (or group of assets) by another part of the business, other than the part of the business where the asset 'resides'. The charge reflects the share of the depreciation of that asset or group of assets proportional to the estimated use of that asset by the relevant business area.
- Sludge disposal costs increase in 2018-19 and 2019-20 as a result of the Sludge Strategy investments at the end of AMP6.

Line A8 – Local authority and Cumulo rates

The cost of local authority rates. This should include both the local authority rates and cumulo rates.

The costs associated with business rates are static until the revaluation process in 2021-22. The £3.4m revaluation increase reflects the impact of adjusting for tender price indices (on a basis consistent with the last revaluation) and also reflect an increase in the decapitalisation rate from a historic low of 3.8% to a more reasonable long term average of 4.1% (compared to a recent historic high of 4.5%). We have agreed this approach with our advisors Lambert Smith Hampton. We have not budgeted for a further rates revaluation in AMP 7.

Costs increase by a further £0.8m from 2021-22 to 2024-25, which reflects proposed changes in Welsh Government legislation, which will require DCWW to notify billing authorities of improvements to assets as they arise (currently there is no such obligation). This will result in asset improvements being reflected in rates charges more quickly and charges being incurred against assets not currently assessed (or under assessed).

Line A9 – Total operating expenditure (excluding third party services)

Total operating costs excluding third party services. Calculated as the sum of WWS1 lines 1 to 8. Calculated as the sum of WWS1 lines 1 to 8

Line A10 – Third party services

Operating expenditure for providing third party services. See appendix 1 of RAG 4.

Sewer Location Survey costs are forecast to increase from £70k to £200k from 2017-18 to 2018-19 and then stay static until 2024-25. The increase reflects an improved process for capturing costs (and recharges) associated with this activity.

Line A11 – Total operating expenditure

Total operating expenditure for the wholesale business only within each business category. Calculated as the sum of WWS1 lines 9 and 10. Calculated as the sum of WWS1 lines 9 and 10.

Line B12 - Maintaining the long term capability of the assets ~ infra

Capital expenditure on infrastructure assets excluding third party capex to maintain the long term capability of assets and to deliver base levels of service. Where projects have drivers both of enhancement and capital maintenance, companies should apply a method of proportional allocation to allocate costs between enhancement and capital maintenance.

We have a good understanding of the costs associated with maintaining our infrastructure assets. Whilst the AMP 7 profile differs from that in AMP 6, it reflects the scheduled maintenance programme of work required.

Private sewers costs have been included in this line where it was considered that there this resulted in enhancing the asset; line 5 commentary provides further detail

[Our treatment has changed to expense all infrastructure maintenance expenditure in the year in which it occurs.](#)

Line B13 - Maintaining the long term capability of the assets ~ non~infra

Capital expenditure on non-infrastructure assets excluding third party capex to maintain the long term capability of assets and to deliver base levels of service. Where projects have drivers both of enhancement and capital maintenance, companies should apply a method of proportional allocation to allocate costs between enhancement and capital maintenance.

In AMP 6 (years 3-5) DCWW is investing £140m in sludge schemes, which complete in 2019-20.

Once complete, the non-infra spend reduces to a level of approximately £65m per year. Sewerage Collections spend increase at the end of AMP 6 and establishes a new higher rate into AMP 7 as a result of costs associated with the NEP.

The significant reduction in costs associated with Sewerage Treatment between 2019-20 and 2021-22 relates to the profiling of spend in the latter part of AMP 6, which reduces into AMP 7 as the AMP 6 programme of work is completed.

There is a £10.169m difference to the APR table on this line due to the Principal Use Adjustment. Adopted pumping station costs have been included in this line; line 5 commentary provides further detail

Line B14 - Other capital expenditure ~ infra

Any capital expenditure on infrastructure assets other than defined in WWS1 line 11 excluding third party capex.

There is a £13.452m difference to the APR table on this line in 2017-18 due to the exclusion of L2 Driver costs at the Loughor investment in that year from the WWS1 table.

In 2020-21 we are recognising the one off spend relating to the AMP 6 special factor investment case for Llanelli /Gowerton (£90m). The higher run rate in AMP 7 is as a result of the higher environmental programme of works required by NRW and the EA.

Line B15 - Other capital expenditure ~ non~infra

Any capital expenditure on non-infrastructure assets other than defined in WWS1 line 12 excluding third party capex.

There is a £4.715m difference to the APR table on this line in 2017-18 due to the exclusion of L2 Driver costs at the Loughor investment in that year from the WWS1 table.

The spike of cost in AMP 6 relates to a number of Wastewater Treatment Works schemes allocated to growth at sewage treatment works (excluding sludge treatment). The larger of the schemes includes Hook & Johnston, Kimmell Bay and Chester. Some schemes will have completion dates in AMP7. The higher run rate in AMP 7 is as a result of the higher Environmental Programme of works required by NRW and the EA.

Line B16 - Infrastructure network reinforcement

Infrastructure network reinforcement - a water or sewerage 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, 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 water or sewerage undertaker's existing network assets beyond the nearest practicable point where the connection to the water or 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 water or sewerage undertaker's infrastructure charges.

This reflects a steady state of spend based on the actual costs disclosed in the APR for Developer services network reinforcement work , forecast forward based on our best view of activity levels in AMP 7.

Line B17 - Total gross capital expenditure excluding third party services

Total gross capital expenditure excluding third party services. Calculated as the sum of WWS1 lines 12 to 16.

Calculated as the sum of WWS1 lines 12 to 16.

Line B18 - Third party services

Capital expenditure for providing third party services.

These relates to charges for Searches fees to developers etc. who ask for survey plans & searches etc. These are based upon 2017-18 actuals which are forecast to the end of the AMP. We have not forecast any capital costs in AMP 7 for these.

Line B19- Total gross capital expenditure

Total gross capital expenditure. Calculated as the sum of WWS1 lines 17 and 18.

Calculated as the sum of WWS1 lines 17 and 18.

Line B20 and 21- Grants and contributions

Grants and contributions as reported in Table 4D/4E of RAG4. Input as a positive number. This will be equal to table App 28 line 29 for years 2015-2025.

Grants and Contributions increase to the end of AMP6 in line with Developer Services activity, which we forecast to reduce back to sub £10m annual levels during AMP7. Further details are given in the commentary for App28.

The capital income included in the September submission has been split between operating expenditure (C20) and capital expenditure (C21). The contributions allocated to operating expenditure covers Sewer adoptions and diversions for which the respective costs are included in "Other operating expenditure ~ Renewals expensed in year (Infrastructure).

Line B22 - Totex

Totex. Calculated as the sum of WWS1 lines 11 and 19 minus 20.

Calculated as the sum of WWS1 lines 11 and 19 minus 20 and 21.

Line C23 - Pension deficit recovery payments

Actual pension deficit recovery payments including costs capitalised and any group recharges for pension deficit costs.

Pension deficit recovery payments represent Wastewater's share of forecast cash payments into the defined benefit DCWW Pension Scheme over and above normal contributions. Under our extant recovery plan we are committed to making payments totalling £6.7m in both 2017-18 and 2018-19, and thereafter a total of £3.5m per annum until 2029-30. Cash payments have been allocated to regulatory business units based on the parts of the business in which scheme members work or worked.

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Query

Table App22 Pensions:-

We would expect the total cash pension deficit contributions reported in block D to equal those reported in line 22 of WS1 and WWS1, line 7 of R1 and line 5 of R4. We note that yours do for the remainder of AMP6 but do not for AMP7.

Please provide the correct figures.

Company response

The total cash pension deficit contributions reported in block D will not equal those reported in line 22 of WS1 and WWS1, line 7 of R1 and line 5 of R4 as cash pension deficit contributions for AMP7 in table App22 are stated at 2017-18 (CPIH deflated) whereas lines 7 of R1 and line 5 of R4 are stated at outturn (nominal).

However during our reconciliation we note that the pension deficit contribution in WWS1 line 22 has not used the latest pension deficit contribution amounts and therefore the table WWS1 will need to be adjusted as follows:

Table	Submitted	Revised	Adjustment
WWS1	WWS1	WWS1	
line22			

Welsh Water Wastewater Services Business Plan Table Commentaries

	£m	£m	£m
2018-19	2.531	2.531	-
2019-20	1.313	1.313	-
2020-21	1.300	1.226	0.074
2021-22	1.300	1.202	0.098
2022-23	1.300	1.180	0.120
2023-24	1.300	1.155	0.145
2024-25	1.300	1.132	0.168

The reconciliation between the tables is shown below:

App 22 deficit contribution breakdown is as follows and remains unchanged:

Line description	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Price base	Outturn (nominal)		2017-18 FYA (CPIH deflated)				
D Cash contributions (DB schemes, deficit recovery) ~ actual and forecast							
27 Residential retail ~ cash contributions (DB schemes, deficit recovery)	0.599	0.311	0.290	0.285	0.279	0.274	0.268
28 Business retail ~ cash contributions (DB schemes, deficit recovery)	0.067	0.035	0.033	0.032	0.031	0.031	0.030
29 Wholesale water resources ~ cash contributions (DB schemes, deficit recovery)	0.200	0.104	0.097	0.095	0.093	0.092	0.090
30 Wholesale water network plus ~ cash contributions (DB schemes, deficit recovery)	3.263	1.687	1.577	1.545	1.515	1.485	1.456
31 Wholesale wastewater bioreources ~ cash contributions (DB schemes, deficit recovery)	0.400	0.208	0.194	0.190	0.188	0.183	0.179
32 Wholesale wastewater network plus ~ cash contributions (DB schemes, deficit recovery)	2.131	1.105	1.032	1.012	0.992	0.972	0.953
33 Wholesale dummy control ~ cash contributions (DB schemes, deficit recovery)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
34 Total cash contributions (DB schemes, deficit recovery)	6.660	3.450	3.223	3.159	3.098	3.037	2.976

If 2017-18 CPIH deflated price base for AMP7 was reported for all tables the costs would be shown as below, which reconciles back to App22:

	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Cash contributions (DB schemes, deficit recovery) ~ actual and forecast	Outturn (nominal)		2017-18 FYA (CPIH deflated)				
Table WWS1 line 22	2.531	1.313	1.226	1.202	1.180	1.155	1.132
Table WS1 line 22	3.463	1.791	1.674	1.640	1.608	1.577	1.546
Table R1 line 7	0.599	0.311	0.290	0.285	0.279	0.274	0.268
Table R4 line 5	0.067	0.035	0.033	0.032	0.031	0.031	0.030
	6.660	3.450	3.223	3.159	3.098	3.037	2.976

However as R1 and R4 are stated at outturn (nominal) for AMP7 the amounts reported in the tables (with the revised WWS1 change) is as follows:

	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Cash contributions (DB schemes, deficit recovery) ~ actual and forecast	Outturn (nominal)		2017-18 FYA (CPIH deflated)				
Table WWS1 line 22	2.531	1.313	1.226	1.202	1.180	1.155	1.132
Table WS1 line 22	3.463	1.791	1.674	1.640	1.608	1.577	1.546
Outturn (nominal)							
Table R1 line 7	0.599	0.311	0.311	0.311	0.311	0.311	0.310
Table R4 line 5	0.067	0.035	0.035	0.035	0.035	0.035	0.035
	6.660	3.450	3.246	3.188	3.134	3.078	3.023

Line C24 - Other cash items

Other cash items not including in the accounting charge.

There are no costs for this line.

Line C25 - Totex including cash items

Totex including cash items. Calculated as the sum of WWS1 lines 21 to 23.

Calculated as the sum of WWS1 lines 22 to 24.

Line D26 - Item 1 - Swansea Bay Rates refund

Please specify atypical items in the lines below. Atypical items are defined as unusual items outside ordinary activities. This would include items such as office moves and one-off reorganisations. For avoidance of doubt these items should not be included in lines 1-24 above

This relates to rates a forecast rebate for Swansea treatment works as a result of an appeal against the 2010 rates listing. This is explained in more detail in table WWS7.

Line D36- Total atypical expenditure)

Total atypical expenditure. Calculated as the sum of WWS1 lines 25 to 3.

There are no atypical cost.

Line E37 –Total expenditure

Total expenditure. Calculated as the sum of WWS1 lines 24 and 35.

Calculated as the sum of WWS1 lines 25 and 36.

WWS2 – Wholesale wastewater capital and operating expenditure by purpose

We have altered this table to accept a number of elements of the draft determination. A summary is given in the following tables (all figures are £million).

Row Labels	April plan totex	Current totex	DD accepted
A1 First time sewerage (s101A)	£ 5.893	£ 4.427	£ 1.466
A2 Sludge enhancement (quality)	£ -	£ 5.829	£ 0.187
A3 Sludge enhancement (growth)	£ -	£ -	£ -
A4 WINEP / NEP ~ Conservation drivers	£ 1.593	£ 1.504	
A5 WINEP / NEP ~ Eels Regulations (measures at outfalls)	£ -	£ -	
A6 WINEP / NEP ~ Event Duration Monitoring at intermittent discharges	£ 1.751	£ 1.657	
A7 WINEP / NEP ~ Flow monitoring at sewage treatment works	£ 21.194	£ 20.055	
A8 NEP ~ Monitoring of pass forward flows at CSOs	£ -	£ -	
A9 WINEP / NEP ~ Schemes to increase flow to full treatment	£ 19.235	£ 18.191	
A10 WINEP / NEP ~ Storage schemes at STWs to increase storm tank capacity	£ 5.749	£ 5.435	
A11 WINEP / NEP ~ Storage schemes in the network to reduce spill frequency at CSOs, etc	£ 48.063	£ 45.432	
A12 WINEP / NEP ~ Chemicals removal schemes	£ 0.046	£ 0.046	
A13 WINEP / NEP ~ Chemicals monitoring / investigations / options appraisals	£ 2.107	£ 1.992	
A14 NEP ~ National phosphorus removal technology investigations	£ -	£ -	
A15 WINEP / NEP ~ Groundwater schemes	£ -	£ -	
A16 WINEP / NEP ~ Investigations	£ 6.629	£ 6.266	
A17 WINEP / NEP ~ Nutrients (N removal)	£ -	£ -	
A18 WINEP / NEP ~ Nutrients (P removal at activated sludge STWs)	£ 42.657	£ 40.328	
A19 WINEP / NEP ~ Nutrients (P removal at filter bed STWs)	£ 43.715	£ 41.374	
A20 WINEP / NEP ~ Reduction of sanitary parameters	£ 14.370	£ 13.590	£ 11.239
A21 WINEP / NEP ~ UV disinfection (or similar)	£ -	£ -	£ -
A22 NEP ~ Discharge relocation	£ -	£ -	£ -
A23 NEP ~ Flow 1 schemes	£ -	£ -	£ -
A24 Odour	£ 3.203	£ 3.103	£ 0.100
A25 New development and growth	£ -	£ -	£ -
A26 Growth at sewage treatment works (excluding sludge treatment)	£ -	£ -	
A27 Resilience		£ -	£ -
Sewer Flooding	£ 42.335	£ 42.335	£ -
Standby generation	£ 5.192	£ 3.946	£ 1.246
Condition surveys	£ 3.655	£ -	£ 3.655
Sludge	£ 6.016	£ -	£ -
DWMPs	£ 13.624	£ -	£ -
Other	£ 7.429	£ -	£ 7.429
A28 SEMD	£ 0.661	£ 0.661	£ -
A29 Non-SEMD related security enhancement	£ 0.330	£ 0.330	£ -
A30 Reduce flooding risk for properties	£ -	£ -	£ -
A31 Transferred private sewers and pumping stations	£ -	£ -	£ -
A32 Capital expenditure purpose - AMP 4 Continuous Discharges	£ -	£ -	£ -
A33 Capital expenditure purpose - AMP 4 Intermittent Discharges	£ -	£ -	£ -
A34 Capital expenditure purpose - ESL - UID	£ -	£ -	£ -
A35 Capital expenditure purpose - Llanelli/Gowerton UWWTD	£ -	£ -	£ -
A36 Capital expenditure purpose ~ L2 Driver for Loughor	£ 74.368	£ 33.475	£ 40.893
A37 Capital expenditure purpose ~ Pollution Strategy	£ 4.236	£ 4.236	£ -
A38 Capital expenditure purpose ~ Drainage & Wastewater Management Plans	£ -	£ 13.625	£ -
Grand Total	£ 374.051	£ 307.837	£ 66.215
A39 Adjustment		£ 1.261	-£ 1.261
A25, A26 treated as botex+	£ 89.207	£ 87.480	
Total shown in tables	£ 463.258	£ 396.578	£ 64.954

Welsh Water Wastewater Services Business Plan Table Commentaries

Row Labels	DD	Current totex	DD accepted
A1 First time sewerage (s101A)	£ 4.427	£ 4.427	£ 1.466
A2 Sludge enhancement (quality)	£ 5.829	£ 5.829	£ 0.187
A3 Sludge enhancement (growth)	£ -	£ -	£ -
A4 WINEP / NEP ~ Conservation drivers	£ 195.876	£ 1.504	£ 11.239
A5 WINEP / NEP ~ Eels Regulations (measures at outfalls)		£ -	
A6 WINEP / NEP ~ Event Duration Monitoring at intermittent discharges		£ 1.657	
A7 WINEP / NEP ~ Flow monitoring at sewage treatment works		£ 20.055	
A8 NEP ~ Monitoring of pass forward flows at CSOs		£ -	
A9 WINEP / NEP ~ Schemes to increase flow to full treatment		£ 18.191	
A10 WINEP / NEP ~ Storage schemes at STWs to increase storm tank capacity		£ 5.435	
A11 WINEP / NEP ~ Storage schemes in the network to reduce spill frequency at CSOs, etc		£ 45.432	
A12 WINEP / NEP ~ Chemicals removal schemes		£ 0.046	
A13 WINEP / NEP ~ Chemicals monitoring / investigations / options appraisals		£ 1.992	
A14 NEP ~ National phosphorus removal technology investigations		£ -	
A15 WINEP / NEP ~ Groundwater schemes		£ -	
A16 WINEP / NEP ~ Investigations		£ 6.266	
A17 WINEP / NEP ~ Nutrients (N removal)		£ -	
A18 WINEP / NEP ~ Nutrients (P removal at activated sludge STWs)		£ 40.328	
A19 WINEP / NEP ~ Nutrients (P removal at filter bed STWs)		£ 41.374	
A20 WINEP / NEP ~ Reduction of sanitary parameters		£ 13.590	
A21 WINEP / NEP ~ UV disinfection (or similar)	£ -	£ -	£ -
A22 NEP ~ Discharge relocation	£ -	£ -	£ -
A23 NEP ~ Flow 1 schemes	£ -	£ -	£ -
A24 Odour	£ 3.104	£ 3.103	£ 0.100
A25 New development and growth	Included in Botex	£ -	£ -
A26 Growth at sewage treatment works (excluding sludge treatment)		£ -	£ -
A27 Resilience		£ -	£ -
Sewer Flooding	£ -	£ 42.335	£ -
Standby generation	£ 3.946	£ 3.946	£ 1.246
Condition surveys	£ -	£ -	£ 3.655
Sludge	£ -	£ -	£ -
DWMPS	£ -	£ -	£ -
Other	£ -	£ -	£ 7.429
A28 SEMD	£ 0.991	£ 0.661	£ -
A29 Non-SEMD related security enhancement		£ 0.330	£ -
A30 Reduce flooding risk for properties	£ -	£ -	£ -
A31 Transferred private sewers and pumping stations	£ -	£ -	£ -
A32 Capital expenditure purpose - AMP 4 Continuous Discharges	£ -	£ -	£ -
A33 Capital expenditure purpose - AMP 4 Intermittent Discharges	£ -	£ -	£ -
A34 Capital expenditure purpose - ESL - UID	£ -	£ -	£ -
A35 Capital expenditure purpose - Llanelli/Gowerton UWWTD	£ -	£ -	£ -
A36 Capital expenditure purpose ~ L2 Driver for Loughor	£ 20.867	£ 33.475	£ 40.893
A37 Capital expenditure purpose ~ Pollution Strategy	£ -	£ 4.236	£ -
A38 Capital expenditure purpose ~ Drainage & Wastewater Management Plans	£ -	£ 13.625	£ -
Grand Total	£ 235.040	£ 307.837	£ 66.215
A39 Adjustment		£ 1.261	-£ 1.261
A25, A26 treated as botex+		£ 87.480	
Total shown in tables	£ 235.040	£ 396.578	£ 64.954

General comments

“Blind” years 2018-19 and 2019-20: The categorisations, used in the APR tables, of how specific areas of capital spend contribute to the delivery of defined outputs, have been applied consistently to the Blind years’ data. This is based on a project by project analysis undertaken by the company’s Regulatory Analyst and as a result of numerous interviews and meetings with Asset Planners and Asset Managers across the business. Price control and base/enhancement categorisations arrived at in the 2017-18 Annual Performance Review have been applied to the expenditure forecast for 2018-19 and 2019-20.

An exception to this general approach relates to Transferred Private Sewers and Pumping Stations, which have been included here at line 31, but which are not in the Enhancement Expenditure lines 14, 15 and 16 on WWS1 – where they have been included as maintenance costs

Transition money spent on six Loughor Schemes (L2 Driver) have been excluded from here and included in WWS10. The 2017-2018 figures therefore differ from the Annual Performance Report by £18m in respect of the transition spend in the year of that amount.

Forecast years from 2020: Our planned enhancement expenditure at the end of AMP7 is approximately £80m per year. The much higher capex (£152m) shown in 2020-21 is due to “Transition” spend, for our Loughor projects being allocated to this year. Excluding this transition impact, there is a small peak in 2022-23. Expenditure for Gwili Gwendraeth schemes (approx. £50m) runs from 2020-21 to 2022-23; expenditure for FFT and Storm Tank schemes (approx. £28m together) runs from 2022-23 to 2024-25. The single year overlap between these schemes/programmes occurs in 2022-23 and results in the higher expenditure in that year.

Line Commentary

Line A1/B48 - First time sewerage (s101A)

Capital / operating expenditure for new and additional sewage treatment and sewerage assets for first time sewerage schemes to meet the duty under s101A of the Water Industry Act 1991.

Blind Years

In 2017-18 there was expenditure on schemes for our S101a programme these including:

- S101a Conwy Road
- Bagillt S101a
- Llanafan S101a
- Ynyslas S101a
- Ynysybwl S101a

The schemes at Ynyslas and Bagillt are due to continue into 2019-20.

Forecast Years

First time sewerage (s101A) - Overall expenditure was identified on review of:

- Current named duty schemes – Middlegate and Treuddyn
- Forecast duty scheme through appeal process – Red Wharf Bay
- Forecast duty schemes – Based on historic rate of duty schemes and costs. 3 schemes forecast for AMP7.
- Management of s101A assessments.

Proposed investment is phased over AMP7 with named schemes carried out in first 2 years.

Expenditure is detailed in the 5.8L First Time Sewerage Investment Case. New schemes result in opex increase – Line 48.

[We have reduced the overall total expenditure for First time sewerage by £1.466m, accepting the DD.](#)

Line A2/B49 - Sludge enhancement (quality)

Capital / operating expenditure on sludge treatment and disposal assets and associated biogas treatment for meeting new environmental obligations listed in the WINEP / NEP. This is for both infrastructure and non-infrastructure assets.

Blind Years

There is zero enhancement capex or opex in AMP6 because our sludge schemes are maintenance only.

Forecast Years

~~There is zero enhancement capex or opex in AMP7 because our sludge schemes are maintenance only.~~

We have reallocated £5.829m associated with Sludge treatment from Line 27 to this line, accepting the DD.

Line A3/B50 - Sludge enhancement (growth)

Capital / operating expenditure on sludge treatment and disposal assets and associated biogas treatment for providing new capacity for growth. This is for both infrastructure and non-infrastructure assets.

Blind Years

A small element of the growth scheme at Nash Wastewater treatment works satisfies the criteria for inclusion here.

Forecast Years

There is zero enhancement capex or opex in AMP7. We will have completed some major sludge schemes in AMP6 leaving only maintenance schemes in AMP7. We have identified some enhancement expenditure for strategic sludge storage in Line A27 Resilience.

Line A4/B51 - WINEP / NEP ~ Conservation drivers

Capital / operating expenditure on the primary cost driver at quality enhancement schemes listed in the NEP (or WINEP) for AMP5, AMP6 or AMP7 where the objective of the primary driver is to meet the requirements of conservation drivers (the Habitats and Birds Directives, the CROW Act, the NERC Act, the Marine and Coastal Access Act, invasive non-native species and the UK Biodiversity Action Plan) over and above that on schemes and investigations for which expenditure is required to be reported elsewhere in this table (principally WWS2 lines 16 to 20).

Blind Years

Includes two schemes at Llanberis to address NEP Conservation Drivers, which culminate in 2018-19 and others which continue into AMP7.

Forecast Years

These costs include schemes, new monitors and investigations as identified in the Environment Agency's WINEP and Natural Resources Wales' NEP. Expenditure is detailed in the 5.8P Wastewater NEP Investment Case.

The NEP has stated the requirement for 4 schemes to meet conservation driver improvements.

We have reduced the overall total investment associated with NEP in the Round by £11.24m, accepting the DD. We have proportioned this reduction across the 11 associated lines where we have allocated investment in table WWS2.

Line A5/B52 - WINEP / NEP ~ Eels Regulations (measures at outfalls)

Capital / operating expenditure on quality enhancement schemes listed in the NEP (or WINEP) to improve outfalls to prevent the entrainment of fish to meet the requirements of the Eels Regulations.

Blind Years

The WINEP and NEP have not stated any requirement for Improvements or investigation and options relating to Eels regulations, and hence no costs are included here.

Forecast Years

The WINEP and NEP have not stated any requirement for Improvements or investigation and options relating to Eels regulations.

Line A6/B53 - WINEP / NEP ~ Event Duration Monitoring at intermittent discharges

Capital / operating expenditure on quality enhancement schemes listed in the NEP (or WINEP) for AMP5, AMP6 or AMP7 to provide event and duration monitoring of intermittent discharges. For AMP5 this is the Capital / operating expenditure to deliver the outputs included in the sewerage service quality enhancement schedule (Annex 4 – S) driven by the revised EU Bathing Water or Shellfish Waters Directives (driver codes rB5 and S8 respectively). For AMP6 these are the outputs required by the Environment Agency (or Natural Resources Wales) under driver codes rB5, S8, EDM1, EDM2 and EDMW. For AMP7 these are the outputs required by the Environment Agency (or Natural Resources Wales) under driver codes U_MON1, U_MON2, U_MON3, SW_MON and BW_MON.

Blind Years

There are a number of schemes in the programme to address the NEP - Event Duration Monitoring at intermittent discharges. It is an ongoing programme of work that will continue throughout this AMP.

Forecast Years

These costs include schemes new monitors and investigations as identified in the Environment Agency's WINEP and Natural Resources Wales' NEP. Expenditure is detailed in the 5.8P Wastewater NEP Investment Case.

The WINEP and NEP have stated the requirement for ~~390~~ 388 intermittent sites to install Event Duration monitors. **Costs are associated with U_MON3 driver monitor installations only. Each of these EDM monitors will be installed in conjunction with a U_MON4 monitor, as such permitting costs have been included within U_MON4 proposed investment in Line A7.**

We have reduced the overall total investment associated with NEP in the Round by £11.24m, accepting the DD. We have proportioned this reduction across the 11 associated lines where we have allocated investment in table WWS2.

Line A7/B54 - WINEP / NEP ~ Flow monitoring at sewage treatment works

Capital / operating expenditure on quality enhancement schemes listed in the WINEP / NEP to provide flow monitoring at sewage treatment works (AMP6 driver code: Flow3, AMP7 driver codes: U_MON4, U_MON5).

Blind Years

In this line we have reported a scheme for Flow 2 monitors at water treatment works as this records the effluent from Court Farm WTW. This was the only suitable/best fit line that we could use. There is no line in the water table for this to be reported. The costs for this scheme 2017-18 is £46k. We have also reported Flow 3 schemes to address NEP - Flow monitoring at sewage treatment works.

Forecast Years

These costs include schemes, new monitors and investigations as identified in the Environment Agency's WINEP and Natural Resources Wales' NEP. Expenditure is detailed in the 5.8P Wastewater NEP Investment Case.

The WINEP and NEP have stated the requirement for ~~429 WWTWs~~ 427 sites to install flow monitoring **under the following drivers: U_MON4 (389 No.), U_MON5 (28 No.), U_MON6 (9 No.) and EPR_MON1 (1 No.).**

For costing purposes we have assumed that each installation will require a minor variation of the permit at a cost of £2,010 per site. This permitting cost is taken from the Environment Agency's *Tables of Charges The Environment Agency (Environmental Permitting) (England) Charging Scheme 2018* published in March 2018. We have assumed that Natural Resources Wales will apply similar

permitting charges for AMP7. Note that U_MON4 sites will also have U_MON3 EDM monitors installed. As such permitting costs have been allocated to this line so there is no double counting of permitting costs in line A6. The table below provides the total permitting cost included within line A7.

Installation Costs (£m)	Permitting Costs (£m)	Total cost (£m)
19.940	0.858	20.778

As with the Flow 2 driver monitors installed in AMP6, we have included U_MON6 and EPR_MON1 drivers at WTWs as the drivers require monitoring of effluent flows from WTWs. This was the only suitable/best fit line that we could use. There is no line in the water table for this to be reported.

We have reduced the overall total investment associated with NEP in the Round by £11.24m, accepting the DD. We have proportioned this reduction across the 11 associated lines where we have allocated investment in table WWS2.

Line A8/B55 - NEP ~ Monitoring of pass forward flows at CSOs

Capital / operating expenditure on quality enhancement schemes listed in the NEP for AMP6 to provide monitoring of pass forward flows at CSOs (driver code Flow4).

Blind Years

There are a number of schemes in our programme for Flow 4 Monitors to address the NEP - Monitoring of pass forward flows at CSOs. It is an ongoing programme of work that will continue throughout this AMP, with latest best estimate for the Flow 4 programme being around £4m.

Forecast Years

The WINEP and NEP have not stated any requirement for CSOs to have installed pass forward flow monitoring.

Line A9/B56 - WINEP / NEP ~ Schemes to increase flow to full treatment

Capital / operating expenditure on quality enhancement schemes listed in the WINEP / NEP to increase the flow the full treatment to 3PG+I+3E. Relevant Environment Agency driver code for AMP7 schemes is U_IMP5.

Blind Years

There are no sites identified to have increased flow to full treatment schemes for the remainder of AMP6, hence costs are zero.

Forecast Years

These costs include schemes, new monitors and investigations as identified in the Environment Agency's WINEP and Natural Resources Wales' NEP. Expenditure is detailed in the 5.8P Wastewater NEP Investment Case.

The WINEP and NEP have stated the requirement for 36 sites to have increased flow to full treatment schemes. 5 sites will be delivered in AMP7 and the remaining 31 are proposed to be delivered in AMP8. Schemes have an NEP output date in 2024-25 and are profiled to meet this date. Investigations/surveys will be carried out in AMP7 years 1 and 2 on all 36 sites. Proposed scheme delivery for the 5 sites for completion in AMP7 is for start in year 3 with completion by year 5.

We have reduced the overall total investment associated with NEP in the Round by £11.24m, accepting the DD. We have proportioned this reduction across the 11 associated lines where we have allocated investment in table WWS2.

Line A10/B57 - WINEP / NEP ~ Storage schemes at STWs to increase storm tank capacity

Capital / operating expenditure on quality enhancement schemes listed in the WINEP / NEP to increase the storm tank capacity to 68 l/hd or to 2 hours retention at max flow into the tanks.

Blind Years

No sites identified in remainder of AMP6 requiring storage schemes to increase storm tank capacity, hence zero costs allocated.

Forecast Years

These includes costs for schemes, new monitors and investigations as identified in the Environment Agency's WINEP and Natural Resources Wales' NEP. Expenditure is detailed in the 5.8 Wastewater NEP Investment Case.

The WINEP and NEP have stated the requirement for 112 sites to have storage schemes to increase storm tank capacity. 13 sites will be delivered in AMP7 and the remaining 99 are proposed to be delivered in AMP8. Schemes have an NEP output date in 2024-25 and are profiled to meet this date. Investigations/surveys will be carried out in the early part of AMP7 to assess all 13 sites initially and for the 99 sites identified for delivery in AMP8. Proposed scheme delivery for the 13 sites for completion in AMP7 is for start in year 3 and completion by year 5.

[We have reduced the overall total investment associated with NEP in the Round by £11.24m, accepting the DD. We have proportioned this reduction across the 11 associated lines where we have allocated investment in table WWS2.](#)

Line A11/B58 - WINEP / NEP ~ Storage schemes in the network to reduce spill frequency at CSOs, etc
Capital / operating expenditure on the primary cost driver of quality enhancement schemes listed in the NEP (or WINEP) for AMP5, AMP6 or AMP7 where the objective of the primary cost driver is to meet new or tightened spill frequency objectives at network assets, eg CSOs (whether or not there is an explicit spill frequency requirement) by the provision of new or additional storage volume.

Blind Years

We have a number of schemes to address NEP - Storage schemes to reduce spill frequency at CSOs, storm tanks etc. some of which have been completed in 2018-19 though a couple, will continue to the last year of the AMP.

Forecast Years

These include costs for schemes, new monitors and investigations as identified in the Environment Agency's WINEP and Natural Resources Wales' NEP. Expenditure is detailed in the Wastewater NEP Investment Case.

The WINEP and NEP have stated the requirement for 6 named sites to have storage schemes in the network to reduce spill frequency at CSOs, etc linked to improvements for the Menai Shellfish waters. There is also investment allocated under the Storm Overflow Assessment Framework (SOAF) to undertake asset improvement at sites following SOAF investigations.

[We have reduced the overall total investment associated with NEP in the Round by £11.24m, accepting the DD. We have proportioned this reduction across the 11 associated lines where we have allocated investment in table WWS2.](#)

Line A12/B59 - WINEP / NEP ~ Chemicals removal schemes

Capital / operating expenditure on improvements listed in the NEP (or WINEP) as part of the national 'Pathway to good measures for chemicals' programme or to prevent deterioration in chemical status or to achieve standstill limits for chemicals. (Relevant Environment Agency driver codes for AMP7: WFD_IMP_CHEM, WFD_NDLS, some WFD_ND and potentially L_IMP and LWFD_IMP).

Blind Years

No sites identified to have chemical removal schemes in AMP6

Forecast Years

The WINEP and NEP have not stated any requirements for sites to have chemical removal schemes.

Line A13/B60 - WINEP / NEP ~ Chemicals monitoring / investigations / options appraisals

Capital / operating expenditure on monitoring, investigations, feasibility studies and improvements listed in the NEP (or WINEP) as part of the national Chemicals Investigation Programme (driver codes C1 - C3 in AMP5, C4 - C7 in AMP6 and WFD_INV_CHEM1-9 and WFD_MON_CHEM in AMP7).

Blind Years

Includes biological nutrient removal schemes

Forecast Years

These include schemes, new monitors and investigations as identified in the Environment Agency's WINEP and Natural Resources Wales' NEP. Expenditure is detailed in the 5.8P Wastewater NEP Investment Case.

The WINEP and NEP have stated the requirement for 33 chemical monitoring / investigations /options appraisals to be carried out in AMP7.

We have reduced the overall total investment associated with NEP in the Round by £11.24m, accepting the DD. We have proportioned this reduction across the 11 associated lines where we have allocated investment in table WWS2.

Line A14/B61 - NEP ~ National phosphorus removal technology investigations

Capital / operating expenditure on monitoring, investigations, feasibility studies and improvements listed in the NEP as part of the national AMP6 Phosphorus removal technology investigations programme (driver codes P1 - Px).

Blind Years

The credit in 2017-18 relates to a reversed over-accrual. No further costs forecast to the end of the AMP, as there is no requirement for national phosphorous removal technology investigations to be undertaken.

Forecast Years

The WINEP and NEP have not stated any requirement for national phosphorus removal technology investigations to be undertaken in AMP7.

Line A15/B62 - WINEP / NEP ~ Groundwater schemes

Capital / operating expenditure on the primary cost driver of quality enhancement schemes listed in the NEP (or WINEP) for AMP5, AMP6 or AMP7 where the objective of the primary cost driver is to meet one or more requirements of the EU Groundwater Directive. For AMP5 this is the capital / operating expenditure to deliver the outputs included in the sewerage service quality enhancement schedule (Annex 4 – S) associated with driver codes G1, G2 and G3. (Expenditure associated with driver code G4 should be included in table WWS2 line 16). For AMP6 it is the capital / operating expenditure associated with driver code G1. For AMP7 the relevant Environment Agency driver codes are WFDGW_ND_GWQ and WFDGW_IMP_GWQ.

Blind Years & Forecast Years

The WINEP and NEP have not stated any requirement for Improvements relating to groundwater schemes.

Line A16/B63 - WINEP / NEP ~ Investigations

Capital / operating expenditure on investigations listed in the NEP (or WINEP) for AMP5, AMP6 or AMP7 over and above that on investigations for which expenditure is required to be reported elsewhere in this table (principally WWS2 lines 13 and 14).

Blind Years

Includes a number of Investigation schemes that have been allocated to this line such as

- AMP 6 NEP Coastal Investigations
- WFD investigations

- Crow Investigations

Forecast Years

These include costs for new monitors and investigations as identified in the Environment Agency's WINEP and Natural Resources Wales' NEP. Expenditure is detailed in the 5.8P Wastewater NEP Investment Case.

The WINEP and NEP have stated the requirement for investigations to be carried out in AMP7 related to Water Framework Directive (WFD), coastal, SOAF and conservation drivers.

[We have reduced the overall total investment associated with NEP in the Round by £11.24m, accepting the DD. We have proportioned this reduction across the 11 associated lines where we have allocated investment in table WWS2.](#)

Line A17/B64 - WINEP / NEP ~ Nutrients (N removal)

Capital / operating expenditure on the primary cost driver of quality enhancement schemes listed in the NEP (or WINEP) for AMP5, AMP6 or AMP7 where the objective of the primary cost driver is to meet new or tightened consent conditions for nitrogen.

Blind Years & Forecast Years

The WINEP and NEP have not stated any requirement for improvements relating to nutrient N removal consents.

Line A18/B65 - WINEP / NEP ~ Nutrients (P removal at activated sludge STWs)

Capital / operating expenditure on the primary cost driver of quality enhancement schemes listed in the NEP (or WINEP) for AMP5, AMP6 or AMP7 where the objective of the primary cost driver is to meet new or tightened consent conditions for phosphorus at an activated sludge STW.

Blind Years

The costs included in the line to address NEP - Nutrients (P removal at activated sludge STWs) include two large schemes at Ruthin and Denbigh which are due to be completed in 2019-20. The latest best estimate (LBE) for costs on all P-removal schemes (lines 18 and 19) from April 2018 to the end of AMP6 totals a combined £35m.

Forecast Years

These include schemes, new monitors and investigations as identified in the Environment Agency's WINEP and Natural Resources Wales' NEP. Expenditure is detailed in the 5.8P Wastewater NEP Investment Case.

The WINEP and NEP have stated the requirement for 7 WWTWs to meet tightened nutrient P removal consents at activated sludge WWTWs. 5 sites will be delivered in AMP7 and the remaining 2 are proposed to be delivered in AMP8.

[We have reduced the overall total investment associated with NEP in the Round by £11.24m, accepting the DD. We have proportioned this reduction across the 11 associated lines where we have allocated investment in table WWS2.](#)

Line A19/B66 - WINEP / NEP ~ Nutrients (P removal at filter bed STWs)

Capital / operating expenditure on the primary cost driver of quality enhancement schemes listed in the NEP (or WINEP) for AMP5, AMP6 or AMP7 where the objective of the primary cost driver is to meet new or tightened consent conditions for phosphorus at a biological filter STW.

Blind Years

The costs included in the line to address NEP - Nutrients (P removal at filter bed STWs) mainly relate to seven schemes of which two schemes are due to be completed in 2018-19 while the remaining five (at Eglwysbach, Rhiwlas, Dyserth, Brynmaer and Llety Brongu) are due to be completed in 2019-20. As per line A18 above, the LBE for costs on all P-removal schemes (lines 18 and 19) from April 2018 to the end of AMP6 totals a combined £35m).

Forecast Years

These include schemes, new monitors and investigations as identified in the Environment Agency's WINEP and Natural Resources Wales' NEP. Expenditure is detailed in the 5.8P Wastewater NEP Investment Case.

The WINEP and NEP have stated the requirement for 42 WWTWs to meet tightened nutrient P removal consents at filter bed WWTWs. 20 sites will be delivered in AMP7 and the remaining 22 are proposed to be delivered in AMP8.

We have reduced the overall total investment associated with NEP in the Round by £11.24m, accepting the DD. We have proportioned this reduction across the 11 associated lines where we have allocated investment in table WWS2.

Line A20/B67 - WINEP / NEP ~ Reduction of sanitary parameters

Capital / operating expenditure on the primary cost driver of quality enhancement schemes listed in the NEP (or WINEP) for AMP5, AMP6 or AMP7 where the objective of the primary cost driver is to meet new or tightened consent conditions for one or more of the sanitary parameters.

There are around a dozen schemes to address NEP - Reduction of sanitary parameters, all of which are due to be completed by the end of AMP6, and include Crymych, Hirwaun and Rhydlafar. There are also additional schemes to come on stream over the last two years of AMP6 and large scale investment is planned to start at Gwili Gwendraeth during AMP6.

Forecast Years

These include costs for schemes, new monitors and investigations as identified in the Environment Agency's WINEP and Natural Resources Wales' NEP. Expenditure is detailed in the 5.8P Wastewater NEP Investment Case.

The WINEP and NEP have stated the requirement for 41 WWTWs to meet tightened sanitary determined consents. 13 sites will be delivered in AMP7 and the remaining 28 are proposed to be delivered in AMP8.

We have reduced the overall total investment associated with NEP in the Round by £11.24m, accepting the DD. We have proportioned this reduction across the 11 associated lines where we have allocated investment in table WWS2.

Line A21/B68 - WINEP / NEP ~ UV disinfection (or similar)

Capital / operating expenditure on the primary cost driver at quality enhancement schemes listed in the NEP (or WINEP) for AMP5, AMP6 or AMP7 where the objective of the primary cost driver is to meet new or tightened consent conditions for microbiological parameters to meet the requirements of the EU Shellfish Waters or revised Bathing Water Directives. Such schemes will typically involve UV disinfection but may involve alternative technologies eg membrane filtration.

Blind Years & Forecast Years

The WINEP and NEP have not stated any requirement for improvements relating to UV disinfection.

Line A22/B69 - NEP ~ Discharge relocation

Capital / operating expenditure on the primary cost driver at quality enhancement schemes listed in the NEP for AMP5 or AMP6 where the objective of the primary cost driver is to meet the requirements of the Habitats Directive or the CRow Act (2000) by relocating the discharge to controlled waters.

Blind Years & Forecast Years

The WINEP and NEP have not stated any requirement for improvements relating to discharge relocation.

Line A23/B70 - NEP ~ Flow 1 schemes

Capital / operating expenditure on the primary cost driver of quality enhancement schemes listed in the NEP for AMP5 where the objective of the primary driver is to ensure no deterioration in the current classification of the receiving waters as a result of increased volumes of discharge (historic) - (driver code Flow1)

Blind Years & Forecast Years

The WINEP and NEP have not stated any requirement for improvements relating to the Flow1 driver.

Line A24/B71- Odour

Capital / operating expenditure on schemes where the primary objective is to effect a step change improvement in odour control above base standards.

Blind Years

Swansea Bay Odour scheme is now scheduled for 2019-20 delivery.

Forecast Years

The odour investment – including odour mapping surveys, mitigation schemes and monitors - is described in full in our 5.8N Wastewater Network plus Enhancement Investment Case. There is zero opex impact.

[We have reduced the investment on this line by £0.1m in line with the DD.](#)

Line A25/B72 - New development and growth

Capital / operating expenditure associated with the provision of new development and growth in sewerage services. Includes Capital / operating expenditure associated with the provision of local network assets for sewerage services to provide for new customers with no net deterioration of existing levels of service (new development) and Capital / operating expenditure associated with changes in sewage collected from new and existing customers whilst maintaining existing levels of service (growth). This should exclude Capital / operating expenditure for the purpose of reducing the risk to properties and external areas of flooding from sewers that should be reported in line 30, unless an increase in risk is clearly the result of new development.

Blind Years

This line reflects the profile of new development and growth schemes at the end of the AMP, including growth scheme at Johnston, and developments at Wonastow Road and St Mellons.

Forecast Years

New Development & Growth – Expenditure in this line comes from multiple sources, summarised as follows:

Investment Case	Projects/Programmes	Expenditure
5.8P Wastewater NEP	Gwili Gwendraeth transfer mains and pumping stations; EDM schemes	£12.231m
5.8K Wastewater network plus Growth	Requisitions, Infrastructure Network Reinforcement and Network Growth schemes	£9.094m
5.8G Wastewater Network Maintenance	Sewage pumping station schemes	£318m
5.8N Wastewater Network plus Enhancement	Newport Tunnel	£1.726m
5.8G Wastewater Network Maintenance	Dry Weather Flow compliance schemes (network solutions)	£0.643m
Total		£37.012m £35.286m

Opex contributions to Line 72 come from Sewer Requisitions (in *Wastewater Growth*), EDM schemes (in *Wastewater NEP*) and Gwili Gwendraeth scheme (also in *Wastewater NEP*).

We have reduced the overall total investment associated with New development and growth by £1.727m with the removal of the Newport tunnel scheme. This was a resilience driven scheme with a proportional allocation to growth.

Line A26/B73 - Growth at sewage treatment works (excluding sludge treatment)

Capital / operating expenditure associated with meeting or offsetting changes in demand from new and existing customers at sewage treatment works but excluding sludge treatment centres.

Expenditure at sludge treatment centres should be reported in table WWS2 line 3.

Blind Years

There are a number of WWTW schemes allocated to Growth at sewage treatment works (excluding sludge treatment). The larger of the schemes includes Hook & Johnston, Kinnel Bay and Chester. An element of the scheme costs across lines 18, 19 and 20 have been allocated here as Growth driven. Some schemes will have completion dates in AMP7.

Forecast Years

Expenditure in this line comes from multiple sources, summarised as follows:

Investment Case	Projects/Programmes	Expenditure
5.8P Wastewater NEP	Gwili Gwendraeth schemes, P-removal and 'Reduction of Sanitary Parameters' schemes, Increase FFT schemes	£19.409m
5.8K Wastewater Network plus Growth	WwTWs Growth-led schemes	£28.710m
5.8D Wastewater Treatment Maintenance	Planned maintenance schemes; Dry Weather Flow compliance schemes	£3.3594m
Total		£51.477m

Opex contributions to Line 73 come from WwTWs Quality-led schemes (in *Wastewater NEP*), WwTWs Growth-led schemes (in *Wastewater Growth*) and dry weather flow schemes (in *Wastewater Treatment Maintenance*).

Line A27/B74 -Resilience

Capital / operating expenditure to improve resilience. This relates to expenditure to manage the risk of failing to give consumers an appropriate level of service protection in the face of extreme events caused by hazards that are beyond their control. To include expenditure to meet new, more onerous requirements stemming from the National Flood Resilience Review. For AMP5 this is the Capital / operating expenditure to deliver the outputs included in the supplementary report for improving resilience (e.g. under driver code ESL6).

Blind Years

The AMP6 costs here relate to a resilience pilot scheme which was set-up after a serious flooding incident in Treorchy in December 2013, following a period of intense rainfall. At the subsequent 'Serious Incident Review' meeting, robust action plans were agreed, which included a review of high risk Pumping Station assets in the Rhondda Cynon Taff area.

The negative value of £0.007m returned in 2017-18 under Sludge Treatment is a reversal of an over-accrual

Forecast Years

Resilience - Expenditure in this line comes from multiple sources, summarised as follows: **and is summarised in the document 'B.2.21.WSH.CE.A1 Wastewater resilience IAP response'.**

Investment Case	Projects/Programmes	Expenditure (£m)
5.8N Wastewater Network plus Enhancement	Newport tunnel; Standby generation to manage flood	35.392

	risk in the event of power failure; Drainage & Wastewater Management Plans	
5.8U Cross Service Maintenance	Improved Information Systems	9.821
Principal use adjustment		(9.296)
Total		35.917

Opex impact is zero.

We have reduced the overall total investment associated with this line by £31.972m from £78.253m to £46.281m. We have reallocated £5.829m associated with Sludge quality to Line 2, accepting the DD, we have reallocated £13.624m associated with Drainage and Wastewater Management Plans to Line 38, we have reduced the total expenditure associated with standby generation to £3.946m and removed the remaining resilience risk items, accepting the DD for these.

A summary of our proposed total investment is summarised in the following table -

Projects/Programmes	Expenditure (£m)
Sewer Flooding	£42.335m
Standby generation to manage flood risk	£3.946m
Total	£46.281m

Line A28/B75 - SEMD

Capital / operating expenditure to protect CNI and NI assets and on assessments of potential further improvements to comply with the Security and Emergency Measures Direction 1998 including associated Advice Notes, and including emergency response and resilience requirements. For AMP5 this is the Capital / operating expenditure to deliver the outputs included in the sewerage service quality enhancement schedule (Annex 4 - S) to comply with the SEMD (driver code SEMD).

Blind Years

There is a full programme of SEMD schemes included which is in line with our programme of works for SEMD, which increases marginally on Waste sites into 2019-20.

Forecast Years

This line – SEMD - includes work that is required to meet our obligation under SEMD 1988. The investment is described in our 5.8N Wastewater Network plus Enhancement investment case.

Line A29/B76 - Non-SEMD related security enhancement

Capital / operating expenditure on schemes driven by other (ie non-SEMD) security requirements, for example to improve cyber security or to enhance the security of network and information systems.

Blind Years

No costs incurred on this line in AMP6

Forecast Years

This line includes a programme of work to improve cyber security. The detail is included within the 5.8N Wastewater Network plus Enhancement investment case which outlines the planned programme of work.

Line A30/B77 - Reduce flooding risk for properties

Capital / operating expenditure for the purpose of enhancing the public sewerage system to reduce the risk to properties and external areas of flooding from sewers. Exclude infrastructure renewals expenditure that should be reported in table WWS1 line 12 and expenditure associated with the provision of new sewers for new development and such other expenditure required in consequence of the new development that should be reported in table WWS2 line 25.

Blind Years

Relates to the numerous schemes initiated to reduce flooding risk for properties, including significant investments at Llangoed, Neston and Birchgrove. The increase in 2019-20 is in line with increasing annual programme of works for sewer flooding.

Forecast Years

~~Reduce flood risk for properties — We have proposed a programme of work, rather than name specific schemes at this stage. All expenditure in this line is described in our 5.8N Wastewater Network plus Enhancement investment Case.~~

We have moved all of our investment for tackling sewer flooding out of this line and included it in line 27, Resilience. We have identified that all the increases in sewer flooding that we observe are a consequence of climate change and severe storms, which is a resilience driver.

Line A31/B78 - Transferred private sewers and pumping stations

Capital / operating expenditure on infrastructure and non-infrastructure assets falling within the scope of the transfer of private gravity sewers and lateral drains effected by schemes made by the Secretary of State / Welsh Ministers under the Water Industry (Schemes for Adoption of Private Sewers) Regulations 2011. Expenditure should be reported even if for accounting purposes companies may be treating it as maintenance (rather than enhancement).

Blind Years & Forecast Years

~~Transferred private sewers and pumping stations are included in this table but are not reported in the enhancement lines in WWS1 where, instead, they are shown within the following lines~~

We have removed the expenditure forecast values from this table to avoid confusion with it being viewed as enhancement spend, it was included as base spend in our original submission and in this submission.

	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
	£m	£m	£m	£m	£m	£m	£m	£m
Private sewers and pumping stations	8.375	7.055	8.413	5.748	5.728	5.709	5.683	5.665
Split								
Line 5: Other operating expenditure- Renewals expensed in year (Infrastructure)	6.230	5.248	6.258	3.877	3.863	3.850	3.832	3.820
Line 12: Maintaining the long term capability of the assets ~ infra	0.881	0.742	0.885	1.292	1.288	1.283	1.277	1.273
Line 13: Maintaining the long term capability of the assets ~ non~infra	1.264	1.065	1.270	0.579	0.577	0.576	0.574	0.572
	8.375	7.055	8.413	5.748	5.728	5.709	5.683	5.665

Line A32 – A36

Other capital / operating expenditure by purpose [Company to insert other purposes as required and explain in commentary]. Regard should be had for the desirability of maintaining consistency with corresponding lines in previous data submissions when using these lines.

Line A32 Capital expenditure purpose - AMP 4 Continuous Discharges,

These lines have been added to ensure that the total expenditure in each year has been captured and that the overall expenditure is the same as reported in the APR. The expenditure reported in here are mainly for previous AMP schemes that were not completed in AMP 3/4.

Line A33 Capital expenditure purpose - AMP 4 Intermittent Discharges,
These lines have been added to ensure that the total expenditure in each year has been captured and that the overall expenditure is the same as reported in the APR. The expenditure reported in here are mainly for previous AMP schemes that were not completed in AMP 3/4.

Line A34 Capital expenditure purpose - ESL – UID,
This line relates to schemes that were included in the our PR09 Business Plan for Unsatisfactory Intermittent Discharges (UID's) that had an Enhanced Service Level (ESL) driver that could not be placed in the expenditure purposes above.

Line 35 – Llanelli/Gowerton UWWTD

Blind Years

This spend relates to a programme of works identified to address issues at Llanelli Gowerton. Whilst relating to the L2 driver, this is the element of spend not directly attributable to the driver, and will not be funded from transition monies referred to in WWS10.

The credit in Sewage Treatment relates to an over-accrual reversing in 2017-18.

Forecast years

We have not identified any projects for forecast spend therefore all forecast line entries are zero.

Line A36/B83 - Capital expenditure purpose ~ L2 Driver for Loughor

Other capital / operating expenditure by purpose [Company to insert other purposes as required and explain in commentary]. Regard should be had for the desirability of maintaining consistency with corresponding lines in previous data submissions when using these lines.

Blind Years

AMP6 expenditure on the L2 Driver for Loughor is excluded from WWS1 and WWS2 and is included as transition spend in WWS10. As a result of this exclusion there is an £18m difference to the 2017-18 figures declared in the APR.

Forecast years

Expenditure on this line is linked to the NEP L2 driver for 3 schemes in the Llanelli and Gowerton catchments. In September 2015 the Loughor L2 drivers were included in the NEP to Welsh Water from NRW. These were not included in our PR14 submission, however we did submit a supporting document highlighting the potential risk required to meet this driver. The L2 drivers have a commitment delivery date of 31st December 2020, which we are expected to meet and Welsh Water have ensured the transparency of the costs to deliver this new driver in the transition spend also shown in table WWS10. The expenditure is further detailed in our 5.80 Llanelli and Gowerton investment case.

[We have reduced the overall proposed total investment associated with L2 Driver for Loughor by £40.893m to reflect only the revised forecast spend for 2019/20 \(see WSH.DD.CE.2\).](#)

Line A37/B84 - Capital expenditure purpose ~ Pollution Strategy

Other capital / operating expenditure by purpose [Company to insert other purposes as required and explain in commentary]. Regard should be had for the desirability of maintaining consistency with corresponding lines in previous data submissions when using these lines.

Forecast Years

This is exclusively AMP7 spend, with no costs allocated to this line in AMP6.

This expenditure is described in our 5.8N Wastewater Network plus Enhancement investment case. The opex impact is zero.

Line A38/B85 – Capital expenditure purpose ~ Drainage and Wastewater Management Plans
Other capital / operating expenditure by purpose [Company to insert other purposes as required and explain in commentary]. Regard should be had for the desirability of maintaining consistency with corresponding lines in previous data submissions when using these lines.

Forecast Years

This is exclusively AMP7 spend with no costs allocated to this line in AMP6.

This expenditure is described in our 5.8N Wastewater Network plus Enhancement investment case. The opex impact is zero.

We have reallocated the proposed total investment associated with Drainage and Wastewater Management Plans to the value of £13.625m from Line 27 to this line.

Line A39/B86: Capital expenditure purpose ~ Rounding adjustment

Other capital - operating expenditure by purpose [Company to insert other purposes as required and explain in commentary]. Regard should be had for the desirability of maintaining consistency with corresponding lines in previous data submissions when using these lines.

In our quality control checks prior to submitting these revised tables we found some minor errors in our allocation of enhancement expenditure in this table. Correcting these would have left a discrepancy between WWS2 and WWS1. We have included this line to explain the error. We intend that Ofwat remove this cost as part of the final determination.

WWS10 - Transitional spending in the wholesale wastewater service

Line 1 - First time sewerage (s101A)

Transitional expenditure for new and additional sewage treatment and sewerage assets for first time sewerage schemes to meet the duty under s101A of the Water Industry Act 1991.

We have not identified any projects for transitional spend therefore all lines are zero

Line 4 - WINEP / NEP ~ Conservation drivers

Transitional expenditure on the primary cost driver at quality enhancement schemes listed in the NEP (or WINEP) for AMP5, AMP6 or AMP7 where the objective of the primary driver is to meet the requirements of conservation drivers (the Habitats and Birds Directives, the CROW Act, the NERC Act, the Marine and Coastal Access Act, invasive non-native species and the UK Biodiversity Action Plan) over and above that on schemes and investigations for which expenditure is required to be reported elsewhere in this table (principally WWS10 lines 11 to 15).

We have not identified any projects for transitional spend therefore all lines are zero

Line 5 - WINEP / NEP ~ Eels Regulations (measures at outfalls)

Transitional expenditure on quality enhancement schemes listed in the NEP (or WINEP) either to improve outfalls to prevent the entrainment of fish, provide eel or fish passes or take alternative measures to meet the requirements of the Eels Regulations or carry out investigations required to confirm the level of entrainment and/or the appropriate technical solution. For AMP7 these are the outputs required by the Environment Agency (or Natural Resources Wales) under driver codes EE_IMP and EE_INV.

We have not identified any projects for transitional spend therefore all lines are zero

Line 6 - WINEP / NEP ~ Event Duration Monitoring at intermittent discharges

Transitional expenditure on quality enhancement schemes listed in the NEP (or WINEP) for AMP5, AMP6 or AMP7 to provide event and duration monitoring of intermittent discharges. For AMP5 this is the capital expenditure to deliver the outputs included in the sewerage service quality enhancement schedule (Annex 4 – S) driven by the revised EU Bathing Water or Shellfish Waters Directives (driver codes rB5 and S8 respectively). For AMP6 these are the outputs required by the Environment Agency (or Natural Resources Wales) under driver codes rB5, S8, EDM1, EDM2 and EDMW. For AMP7 these are the outputs required by the Environment Agency (or Natural Resources Wales) under driver codes U_MON1, U_MON2, U_MON3, U_EDMW, SW_MON and BW_MON.

We have not identified any projects for transitional spend therefore all lines are zero

Line 7 – NEP ~ Flow monitoring at sewage treatment works

Transitional expenditure on quality enhancement schemes listed in the NEP for AMP6 to provide flow monitoring at sewage treatment works (driver code Flow3).

We have not identified any projects for transitional spend therefore all lines are zero.

Line 8 NEP ~ Monitoring of pass forward flows at CSOs

Transitional expenditure on quality enhancement schemes listed in the NEP for AMP6 to provide monitoring of pass forward flows at CSOs (driver code Flow4).

We have not identified any projects for transitional spend therefore all lines are zero

Line 9 WINEP / NEP ~ Schemes to increase flow to full treatment

Transitional expenditure on quality enhancement schemes listed in the WINEP / NEP to increase the flow the full treatment to 3PG+I+3E

We have not identified any projects for transitional spend therefore all lines are zero

Line 10 - WINEP / NEP ~ Schemes to increase storm tank capacity

Transitional expenditure on quality enhancement schemes listed in the WINEP / NEP to increase the storm tank capacity to 69 l/hd or to 2 hours retention at max flow into the tanks.

We have not identified any projects for transitional spend therefore all lines are zero

Line 11 - WINEP / NEP ~ Storage schemes to reduce spill frequency at CSOs, storm tanks, etc

Transitional expenditure on the primary cost driver of quality enhancement schemes listed in the NEP (or WINEP) for AMP5, AMP6 or AMP7 where the objective of the primary cost driver is to reduce spill frequency of CSOs, storm tank overflows etc by the provision of new or additional storage volume. Includes WINEP driver UY.

We have not identified any projects for transitional spend therefore all lines are zero

Line 12 - WINEP / NEP ~ Chemicals removal schemes

Transitional expenditure on improvements listed in the NEP (or WINEP) as part of the national 'Pathway to good measures for chemicals' programme or to prevent deterioration in chemical status or to achieve standstill limits for chemicals (driver codes Chem1, ND4 and ND5 in AMP7).

We have not identified any projects for transitional spend therefore all lines are zero

Line 13 - WINEP / NEP ~ Chemicals monitoring / investigations / options appraisals

Transitional expenditure on monitoring, investigations, feasibility studies and improvements listed in the NEP (or WINEP) as part of the national Chemicals Investigation Programme (driver codes C1 - C3 in AMP5, C4 - C7 in AMP6 and Chem 2&3 in AMP7).

We have not identified any projects for transitional spend therefore all lines are zero

Line 14 - NEP ~ National phosphorus removal technology investigations

Transitional expenditure on monitoring, investigations, feasibility studies and improvements listed in the NEP (or WINEP) as part of the national AMP6 Phosphorus removal technology investigations programme (driver codes P1 - Px).

We have not identified any projects for transitional spend therefore all lines are zero

Line 15 - WINEP / NEP ~ Groundwater schemes

Transitional expenditure on the primary cost driver of quality enhancement schemes listed in the NEP (or WINEP) for AMP5, AMP6 or AMP7 where the objective of the primary cost driver is to meet one or more requirements of the EU Groundwater Directive. For AMP5 this is the capital expenditure to deliver the outputs included in the sewerage service quality enhancement schedule (Annex 4 – S) associated with driver codes G1, G2 and G3. (Expenditure associated with driver code G4 should be included in WWS10 line 16). For AMP6 it is the capital expenditure associated with driver code G1. For AMP7 the relevant Environment Agency driver codes are WFDGW_ND_GWQ and WFDGW_IMP_GWQ.

We have not identified any projects for transitional spend therefore all lines are zero

Line 16 - WINEP / NEP ~ Investigations

Transitional expenditure on investigations listed in the NEP (or WINEP) for AMP5, AMP6 or AMP7 over and above that on investigations for which expenditure is required to be reported elsewhere in this table (principally WWS10 lines 13 and 14).

We have not identified any projects for transitional spend therefore all lines are zero

Line 17 - WINEP / NEP ~ Nutrients (N removal)

Transitional expenditure on the primary cost driver of quality enhancement schemes listed in the NEP (or WINEP) for AMP5, AMP6 or AMP7 where the objective of the primary cost driver is to meet new or tightened consent conditions for nitrogen.

We have not identified any projects for transitional spend therefore all lines are zero

Line 18 - WINEP / NEP ~ Nutrients (P removal at activated sludge STWs)

Transitional expenditure on the primary cost driver of quality enhancement schemes listed in the NEP (or WINEP) for AMP5, AMP6 or AMP7 where the objective of the primary cost driver is to meet new or tightened consent conditions for phosphorus at an activated sludge STW.

We have not identified any projects for transitional spend therefore all lines are zero

Line 19 - WINEP / NEP ~ Nutrients (P removal at filter bed STWs)

Transitional on the primary cost driver of quality enhancement schemes listed in the NEP (or WINEP) for AMP5, AMP6 or AMP7 where the objective of the primary cost driver is to meet new or tightened consent conditions for phosphorus at a biological filter STW.

We have not identified any projects for transitional spend therefore all lines are zero

Line 20 - WINEP / NEP ~ Reduction of sanitary parameters

Transitional expenditure on the primary cost driver of quality enhancement schemes listed in the NEP (or WINEP) for AMP5, AMP6 or AMP7 where the objective of the primary cost driver is to meet new or tightened consent conditions for one or more of the sanitary parameters unless the objective is associated with a specific cost driver code for which there is a dedicated line elsewhere in this table (e.g. WFD_ND_GWQ (line 15/62) or Flow1 (line 23/70)). In such cases costs should be excluded from this line and entered in the line for the relevant cost driver code.

We have not identified any projects for transitional spend therefore all lines are zero

Line 21 - WINEP / NEP ~ UV disinfection (or similar)

Transitional expenditure on the primary cost driver at quality enhancement schemes listed in the NEP (or WINEP) for AMP5, AMP6 or AMP7 where the objective of the primary cost driver is to meet new or tightened consent conditions for microbiological parameters to meet the requirements of the EU Shellfish Waters or revised Bathing Water Directives. Such schemes will typically involve UV disinfection but may involve alternative technologies e.g. membrane filtration.

We have not identified any projects for transitional spend therefore all lines are zero

Line 22 - NEP ~ Discharge relocation

Transitional expenditure on the primary cost driver at quality enhancement schemes listed in the NEP for AMP5 or AMP6 where the objective of the primary cost driver is to meet the requirements of the Habitats Directive or the CRow Act (2000) by relocating the discharge to controlled waters.

We have not identified any projects for transitional spend therefore all lines are zero

Line 23 – NEP ~ Flow 1 schemes

Transitional expenditure on the primary cost driver of quality enhancement schemes listed in the NEP for AMP5 where the objective of the primary driver is to ensure no deterioration in the current classification of the receiving waters as a result of increased volumes of discharge (historic) - (driver code Flow1)

We have not identified any projects for transitional spend therefore all lines are zero

Line 24 - Odour

Transitional expenditure on schemes where the primary objective is to effect a step change improvement in odour control above base standards.

We have not identified any projects for transitional spend therefore all lines are zero

Line 25 - New development and growth

Transitional expenditure associated with the provision of new development and growth in sewerage services. Includes capital expenditure associated with the provision of local network assets for sewerage services to provide for new customers with no net deterioration of existing levels of service (new development) and capital expenditure associated with changes in sewage collected from new and existing customers whilst maintaining existing levels of service (growth). This should exclude capital expenditure for the purpose of reducing the risk to properties and external areas of flooding from sewers that should be reported in WWS10 line 30, unless an increase in risk is clearly the result of new development.

We have not identified any projects for transitional spend therefore all lines are zero

Line 26 - Growth at sewage treatment works (excluding sludge treatment)

Transitional expenditure associated with meeting or offsetting changes in demand from new and existing customers at sewage treatment works but excluding sludge treatment centres.

We have not identified any projects for transitional spend therefore all lines are zero

Line 27 – Resilience

Transitional expenditure to improve resilience. This relates to expenditure to manage the risk of failing to give consumers an appropriate level of service protection in the face of extreme events caused by hazards that are beyond their control. For AMP5 this is the capital expenditure to deliver the outputs included in the supplementary report for improving resilience (e.g. under driver code ESLO4).

We have not identified any projects for transitional spend therefore all lines are zero

Line 28 - SEMD

Transitional expenditure on schemes to protect assets and assessments of potential further improvements to comply with the Security and Emergency Measures Direction 1998 including associated Advice Notes. For AMP5 this is the capital expenditure to deliver the outputs included in the sewerage service quality enhancement schedule (Annex 4 - S) to comply with the SEMD (driver code SEMD).

We have not identified any projects for transitional spend therefore all lines are zero

Line 29 - Non-SEMD related security enhancement

Transitional expenditure on schemes driven by other (i.e. non-SEMD) security requirements, for example to improve cyber security or to enhance the security of network and information systems.

We have not identified any projects for transitional spend therefore all lines are zero

Line 30 - Reduce flooding risk for properties

Capital expenditure for the purpose of enhancing the public sewerage system to reduce the risk to properties and external areas of flooding from sewers. Exclude infrastructure renewals expenditure that should be reported in WWS1 line 12 and expenditure associated with the provision of new sewers for new development and such other expenditure required in consequence of the new development that should be reported in WWS10 line 25.

We have not identified any projects for transitional spend therefore all lines are zero

Line 31 - Transferred private sewers and pumping stations

Transitional expenditure on infrastructure and non-infrastructure assets falling within the scope of the transfer of private gravity sewers and lateral drains effected by schemes made by the Secretary of State / Welsh Ministers under the Water Industry (Schemes for Adoption of Private Sewers) Regulations 2011. Expenditure should be reported even if for accounting purposes companies may be treating it as maintenance (rather than enhancement).

We have not identified any projects for transitional spend therefore all lines are zero

Line 32 - AMP 4 Continuous Discharges

Other transitional expenditure by purpose

We have not identified any projects for transitional spend therefore all lines are zero

Line 33 - AMP 4 Intermittent Discharges

Other transitional expenditure by purpose

We have not identified any projects for transitional spend therefore all lines are zero

Line 34 - ESL - UID

Other transitional expenditure by purpose

We have not identified any projects for transitional spend therefore all lines are zero

Line 35 - Llanelli/Gowerton UWWTD

Other transitional expenditure by purpose

We have not identified any projects for transitional spend therefore all lines are zero

Line 36 – L2 driver for Loughor

Other transitional expenditure by purpose

We have incurred expenditure from 2016, under the L2 driver, for a programme of works to resolve issues in the Loughor estuary which is being put forward as transition expenditure.

All programme expenditure from 2016-17 to 2019-20 has been aggregated and added to this transition table under year 2019-20.

Loughor actual spend profile in outturn values

Year	2015-16	2016-17	2017-18	2018-19	2019-20
£m		4.253 4.303	18.167 18.162	31.678 18.844	21.902 34.500

Transitional expenditure for AMP7 2020/21 has been calculated as £34.500m which includes only expenditure in outturn values forecast for 2019-20.

Lines 36 – 46

Other transitional expenditure by purpose

We have not identified any projects for transitional spend therefore all lines are zero

Line 47 - Maintaining the long term capability of the assets ~ infra

Transitional expenditure on infrastructure assets excluding third party capex to maintain the long term capability of assets and to deliver base levels of service. Where projects have drivers both of enhancement and capital maintenance, companies should apply a method of proportional allocation to allocate costs between enhancement and capital maintenance

We have not identified any projects for transitional spend therefore all lines are zero

Line 48 - Maintaining the long term capability of the assets ~ non-infra

Transitional expenditure on non-infrastructure assets excluding third party capex to maintain the long term capability of assets and to deliver base levels of service. Where projects have drivers both of enhancement and capital maintenance, companies should apply a method of proportional allocation to allocate costs between enhancement and capital maintenance.

We have not identified any projects for transitional spend therefore all lines are zero

Line 49 - Other capital expenditure ~ infra

Any transitional expenditure on infrastructure assets other than defined in WWS10 line 47 excluding third party capex.

We have not identified any projects for transitional spend therefore all lines are zero

Line 50 - Other capital expenditure ~ non-infra

Any transitional expenditure on non-infrastructure assets other than defined in WWS10 line 48 excluding third party capex.

We have not identified any projects for transitional spend therefore all lines are zero

Line 51 - Total gross transitional expenditure

The total of all wastewater service transition capital expenditure including associated grants and capital contributions and new obligations but excluding assets adopted from third parties where no expenditure is recorded (at nil cost). Equals sum of WWS10 lines 1 to 50.

Equals sum of WWS10 lines 1 to 50

Line 52 - Grants and capital contributions for transitional expenditure

Grants and capital contributions relating to wastewater transition expenditure. This will be a subset of grants and contributions in App 28 line 29

We have not identified any projects for transitional spend therefore all lines are zero

Line 53 - Total net transitional expenditure

The total of all wastewater service transition capital expenditure including new obligations but excluding associated grants and capital contributions and adopted assets at nil cost. Equals WWS10 line 51 minus line 52.

Equals WWS10 line 51 minus line 52.

WWS13 - PR14 wholesale revenue forecast incentive mechanism for the wastewater service

Line 1 - Company name

Company details for WRFIM model

Pre-populated

Line 2 - Company type

Company details for WRFIM model

Pre-populated

Line 3 - Company has accepted WRFIM licence modification

Company details for WRFIM model

We have accepted the licence modification

Line 4 - Penalty rate scaling minimum threshold (+/-)

WRFIM model parameters as defined in the PR14 reconciliation rulebook

Pre-populated

Line 5 - Penalty rate scaling maximum threshold (+/-)

WRFIM model parameters as defined in the PR14 reconciliation rulebook

Pre-populated

Line 6 - Penalty rate (+/-)

WRFIM model parameters as defined in the PR14 reconciliation rulebook

Pre-populated

Line 7 - Specified discount rate

WRFIM model parameters as defined in the PR14 reconciliation rulebook

Pre-populated

Line 8 - Threshold for additional variance analyses (+/-)

WRFIM model parameters as defined in the PR14 reconciliation rulebook

Pre-populated

Line 9 - Allowed revenue - wastewater

2014-15 allowed revenue from company final determination letter, as adjusted for ODIs or IDoK in accordance with the licence

Pre-populated. Data from the PR14 Final Determination Letter

Line 10 - Actual RPI: November index year on year change

Year on year increase in November RPI for the November prior to the start of the financial year
Calculation

Line 11 - K ~ wastewater

Annual K factor from the PR14 final determination, as adjusted for in-period ODIs or interim determination of K in accordance with the licence

Pre-populated and calculation. Data is from the PR14 Final Determination Letter

Line 12 - Total revenue forecast ~ wastewater

Total revenue forecasted in PR14. Calculated as 2014-15 allowed revenue (WWS13 line 9) compounded by RPI (WWS13 line 10) and K (WWS13 line 11).

Calculation

Line 13 - RCM blind year 2014-15 adjustment for implementing via WRFIM ~ wastewater

Revenue Correction Mechanism (RCM) 2014-15 blind year adjustment implemented via WRFIM. As published in December 2016

Pre-population. Data from Ofwat WRFIM Consultation in December 2016

Line 14 - Percentage of RCM adjustment by year ~ wastewater

Profile for applying the RCM adjustment. This should be in accordance with the choice made (as published) in December 2016.

Pre-population. Data from Ofwat WRFIM Consultation in December 2016

Lines 15-20 Revenue recovered

Actual revenue recovered from metered and unmetered customers' wastewater charges, household and non-household over the 2015-2020 price review period. Annual wholesale wastewater charge revenue as reported in company's regulatory reporting 21.

Actual Revenue is obtained from Table 21 of the APR for 2015-16 to 2017-18. Revenue for 2018-19 and 2019-20 is set to achieve the allowed revenue less a planned under-recovery in 2018-19 to avoid significant incident effects at a time of high inflation. Our current assumption is that the abated revenue will be repeated in 2019-20 as outlined in section 4 of the supporting document submitted in July with the Reconciliation Rulebook. Revenue recovered from different customers is based on historical data and the expected rate of meter optants.

Line 21 - Wastewater: Revenue collected from household and non-household

Calculated. Sum of WWS13 lines 15 to 20

Calculation

Line 22 - Wastewater: Grants and contributions

Actual wastewater grants and contributions revenue recovered. As defined in the RAGs for 2017-18 21, total of price control grants and contributions irrespective of accounting treatment. We raised several queries on grants and contributions reporting in the 2016 APR or 2017 APR. As a result of these queries, if a company is aware that previous year's data has not been correctly reported, they should restate the figures in the pre-populated cells using the definition in the RAGs for 2017- 18 reporting.

Data for 2015-16 to 2017-18 is based on the APR figures. In the Annual Performance Report new connections were allocated to third party to ensure the Grants and Contributions align new connections has been allocated to Grants and Contributions as outlined in section 4 of the supporting document submitted in July with the Reconciliation Rulebook.

Line 23 - Wastewater: Revenue recovered

Calculated. Sum of WWS13 lines 21 and 22

Calculation

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

Total grants and contributions that are included in the allowed wastewater revenue totals.

Pre-populated. Data obtained from the Final Determination

Line 25 - Wastewater: Grants and contributions

Relevant wastewater capital contributions from connection charges and revenue from infrastructure charges, defined in the final determination as covered by the price control. As defined in RAG 4.07 2I.
Calculation

Line 26 - Wastewater: Grants and contributions variance

Difference in outturn prices between line 24 and line 25 for wastewater grants and contributions. Line 24 is adjusted to outturn prices using data in App23
Calculation

Line 27 - Main revenue adjustment as incurred ~ Wastewater:

Main revenue adjustment as incurred. These values are calculated in the PR14 reconciliation WRFIM model on 'WRFIM - Waste' sheet in row 41. The values are in outturn prices
Data obtained from the WRFIM Model in 'WRFIM-Water' sheet in row 49 (Row 41 in the previous version of the model)

Line 28 - Penalty adjustment as incurred ~ Wastewater:

Penalty adjustment as incurred. These values are calculated in the PR14 reconciliation WRFIM model on 'WRFIM - Waste' sheet in row 51. The values are in outturn prices.
Data obtained from the WRFIM Model in 'WRFIM-Water' sheet in row 59 (Row 51 in the previous version of the model)

Line 29 - WRFIM adjustment as incurred ~ water

WRFIM adjustment as incurred. These values are calculated in the PR14 reconciliation WRFIM model on 'WRFIM - Waste' sheet in row 56. The values are in outturn prices.
Data obtained from the WRFIM Model in 'WRFIM-Water' sheet in row 64 (Row 56 in the previous version of the model)

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

WRFIM Total reward / (penalty) at the end of AMP6. These values are calculated in the PR14 reconciliation WRFIM model on 'WRFIM - Waste' sheet in row 73. The values are in outturn prices
Data obtained from the WRFIM Model in 'WRFIM-Water' sheet in row 84 (Row 73 in the previous version of the model)

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

WRFIM Total reward / (penalty) at the end of AMP6 expressed in 2017-18 FYA (CPIH deflated) prices. This is an output item from the revenue adjustments feeder model. The value entered is prior to profiling.
Data obtained from the revenue feeder model

WWS15 - PR14 wholesale total expenditure outperformance sharing for the wastewater service

This table has been updated to reflect changes to Inflation.

This table has been updated to reflect changes to the reallocation of Loughor. Further reference to these amendments can be found in WSH.DD.CE.2.

Line 1 – Company type

Company type is either WaSC or WoC

Pre-populated. WaSC

Line 2 – Is company enhanced?

Enhanced or Non-enhanced status in PR14.

Pre-populated. Non-enhanced at PR14

Line 3 – Financing rate

Financing rate. The PR14 final determination weighted average cost of capital.

Pre-populated. PR14 Wholesale Real WACC

Line 4 – Sewerage: implied menu choice

The implied menu choice number for water from PR14 final determination company specific appendix

Pre-populated. Ofwat PR14 Menu Model

Line 5 – Sewerage: FD pension deficit recovery costs allowed

The final determinations pension deficit recovery costs allowance for water from PR14 final determination – company specific appendix

Pre-Populated. PR14 Final determination

Line 6 – Sewerage: Final menu choice

The submitted final menu choice for water from Menu choice confirmation letter 16th January 2015.

Pre-Populated. Final Menu choice confirmation letter

Line 7 Sewerage: Baseline Totex

Ofwat's view of the menu cost baseline at final determinations from PR14 populated final determination menu model.

Pre-Populated. Ofwat PR14 Menu Model

Line 8 - Sewerage: FD allowed totex inclusive of menu cost exclusions, less PDRC allowance

The allowed expenditure in final determinations for input to PAYG from PR14 populated final determination menu model.

Pre-Populated. Ofwat PR14 populated final determination model

Line 9 – Sewerage: Actual Totex

Reported actual totex for water from annual regulatory reporting.

Actual Totex for 2015-16 is obtained from the 2016-17 Cost Assessment Tables as this was restated from the published Annual Performance Report figure. Actual Totex for 2016-17 and 2017-18 are from the Annual Performance Report with 2017-18 amended for the Principal Use Adjustment (PUA) in table WWS1. Forecast Totex is in line with our business plan in WWS1, with the difference being the Principal Use Adjustment posted in respect of Head Office costs and ICT Assets. Expenditure for

Llanelli and Gowerton has been removed for 2016-17 and 2017-18 as detailed in section 3 of the support document submitted in July with the Reconciliation Rulebook.

We note there is an adjustment between WS1 and WS15 due to APR18-19 actuals and the treatment of principle use.

Lines 10 – 14 Adjustments to Totex

Totex exclusions. Actual totex line items to be excluded in menu totex: third party costs, pension deficit recovery costs, other cash items, disallowables as set out in the PR14 reconciliation rulebook guidance.

Actual Exclusions for 2015-16 to 2017-18 are obtained from the Annual Performance Report. Forecast exclusions are in line with our business plan.

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

TTT Control: logging up / (down) of scope swaps. Costs associated with the reallocation of scope from the Infrastructure Provider to Thames Water that are subject to the logging up process.

N/A

Line 16 - TTT control: Land - 100:0 (customer: company) cost sharing factor

TTT control: Land - 100:0 (customer: company) cost sharing factor. TTT control land costs are not subject to the standard menu incentives and have a customer sharing rate of 100:0 to ensure customers benefit from future land disposals.

N/A

Line 17 - Sewerage: Transition expenditure

Totex inclusions – Transition expenditure in 2014-15 (confirmed in final 2010-15 reconciliation decision document).

Pre-Populated. Transition expenditure confirmed in the 2010-15 reconciliation publication. The pre-populated value has been updated see appendix H of the supporting document.

Line 18 - Sewerage: PAYG ratio

The profile of PAYG ratio allowed in final determinations from PR14 final determination – company specific appendix.

Pre-populated. Obtained from the PR14 final determination

Line 19 - Wastewater: revenue adjustment from totex menu model

Output item from totex menu model as appears on the Totex menu adjustments sheet.

Output from the Totex menu model 'Calc' tab line 198

Line 20 - Wastewater: RCV adjustment from totex menu model

Output item from totex menu model as appears on the Totex menu adjustments sheet.

Output from the Totex menu model 'Calc' tab line 203

Line 21 - Wastewater: Totex menu revenue adjustment at 2017-18 FYA CPIH deflated price base

Output item from revenue adjustments model. Totex menu revenue adjustment - Wastewater network at 2017-18 FYA CPIH deflated price base. The value entered is prior to profiling.

Output from the revenue feeder model

Line 22 - Wastewater: Totex menu RCV adjustment at 2017-18 FYA CPIH deflated price base

*Output item from RCV adjustments model. Wastewater: Totex menu RCV adjustment at 2017-18
FYA CPIH deflated price base.*

Output from the RCV feeder model

WWS18 - Explaining the 2019 Final Determination for the wastewater service

Only line 11 in this table has been updated for changes as a result of our August Business Plan.

Table Cell Adjustments

Line 7 Please note we have over written the decimal point compliance for the cells shown below as rounding's were causing the total to show an additional kilometre of improvement to that which we have agreed in the NEP.

2020-21	2021-22	2022-23	2023-24	2024-25	Total
0	4.8	20	0	269.6	294.4

Line Commentary

Line 1 Number of external sewer flooding incidents

The actual and forecast total number of external sewer flooding incidents in accordance with the definition of external sewer flooding published on UKWIR's website. This includes flooding due to overloaded sewers (hydraulic flooding) and due to other causes (FOC). Incidents caused by sewers transferred under the Transfer of Private Sewers Regulations 2011 and pumping stations transferred in 2016 should also be included.

For 2018-19 and 2019-20 the issued guidance is consistent with our existing methodology. We have not excluded any incidents on the basis of 'severe weather'. Our reported performance on external flooding has improved year-on-year, from over 7,000 properties/areas flooded externally in 2012-13. Of the 5,056 properties/areas externally flooded in 2017-18 (this excludes repeat incidents at a property and incidents in severe weather) the 3,929 is the total number of incidents (including repeat flooding and several weather incidents but excludes outside the property boundary) indicating that around 70% were within the boundary of a domestic or non-residential property. For 2020-25 the data will follow the Ofwat definition for external flooding within the curtilage. The targets for individual years follow a straight line between the end of AMP6 target and the end of AMP7 target. This aligns with our performance commitment for external flooding, Rt2 - Sewer flooding on customer property (external).

The definition includes reported external flooding incidents that were not confirmed on site by our response team, such as a flooding incident that has been cleaned up prior to the team arriving. We have not estimated or included an estimate for the number of incidents associated with 'unsubstantiated flooding'. Further clarification and a change in process would be required to capture any additional flooding incidents that should be included as our issue.

Line 2 Number of category 1 & 2 serious pollution incidents

Total number of category 1 & 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 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. Figures from 2015-16 to 2019-20 copied from line 7 of table App31.

It is assumed that all of the pollution incidents caused by ourselves are identified and reported. A target for self-reporting is in place and will help to ensure any incident first identified by us is reported and recorded correctly. There are also a number of projects, such as Event Duration Monitoring, in place to help support the identification of issues with our assets that may cause pollution.

It is assumed that attendance by operational teams leads to the cessation of any polluting discharge and the issue being resolved. Pollution Technicians monitor all reports of pollution and tasks in their geographical area to ensure that no notifications and orders in SAP remain open and unresolved. It is assumed that agreement can be reached between ourselves and NRW or the EA on the future classification, premises type and responsibility (Welsh Water, third party or misconnection) for each incident by the NRW set deadline. If an agreement cannot be reached by this deadline, the NRW decision is final.

It has been assumed that the impacts of extreme weather events upon pollution performance as a result of predicted climate change are transient and localised.

2020-2025 figures are in line with our PR19 targets. We are targeting zero category 1 or 2 incidents within the 2020-25 period.

Line 3 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 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. Figures from 2015-16 to 2019-20 copied from line 8 of table App31.

It is assumed that all of the pollution incidents caused by ourselves are identified and reported. A target for self-reporting is in place and will help to ensure any incident first identified by us is reported and recorded correctly. There are also a number of projects, such as Event Duration Monitoring, in place to help support the identification of issues with our assets that may cause pollution.

It is assumed that attendance by operational teams in future will continue to lead to the cessation of any polluting discharge and the issue being resolved. Pollution Technicians monitor all pollution reports and tasks in their geographical area to ensure that no notifications and orders in SAP remain open and unresolved.

It is assumed that agreement can be reached between ourselves and NRW or the EA on the future classification, premises type and responsibility (Welsh Water, third party or misconnection) for each incident by the NRW set deadline. If an agreement cannot be reached by this deadline, the NRW decision is final.

It has been assumed that the impacts of extreme weather events upon pollution performance as a result of predicted climate change are transient and localised.

During 2020-2025 our performance improvement will exhibit a steady trend of continuous improvement over the five year forecast period as set out in our PR19 Performance Commitment En3 - Pollution incidents from wastewater.

Block B Resilience

Line 4 Asset Health total number of sewer blockages

Total actual and forecast number of sewer blockages on the current network (ie. the sewerage network including private sewers and lateral drains transferred as a result of schemes made by the Secretary of State / Welsh Ministers under the Water Industry (Schemes for Adoption of Private Sewers) Regulations 2011. This line is copied from WWn3 line 5.

2015-16 and 2016-17 numbers have been extracted from APR submissions.

2017-18 to 2024-25 are a direct copy from WWn3 line 5.

Block C Affordability

Line 5 Number of people receiving help paying their wastewater bill

The actual and forecast number of customers receiving financial assistance through the company's special social tariffs and schemes such as Watersure to help them with paying their wastewater bill.

The reason that this line does not reconcile to the Performance Commitment BI2 - Vulnerable customers on social tariffs (BI2) is that BI2 presents the total number of unique customers receiving help with their bill. This is the sum of dual customers plus water only customers plus waste only customers. The entry for this line, on the other hand, is the unique number of dual service and wastewater only customers.

Customers receiving help paying their bill		15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	20-25
A	Water only customers	526	633	984	1355	1515	1549	1584	1618	1652	1685	1618
B	Dual customers (Water and wastewater)	36,540	52,703	89,241	117,588	131,520	134,485	137,449	140,414	143,378	146,244	140,394
C	Wastewater only customers	43	31	34	57	64	66	67	69	70	71	69
MoS BI2												
A+B+C	Total number of "unique" customers receiving help paying their bill	37,109	53,368	90,259	119,000	133,100	136,100	139,100	142,100	145,100	148,000	142,080
WS18 C4												
A+B	Number of people receiving help paying their water bill	37,066	53,337	90,225	118,943	133,036	136,034	139,033	142,031	145,030	147,929	142,011

WWS18 C5

B+C	Number of people receiving help paying their wastewater bill	36,583	52,735	89,275	117,645	131,585	134,551	137,516	140,482	143,448	146,315	140,462
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Block D Markets
Line 6 Number of direct procurement wastewater service schemes

The number of direct procurement wastewater schemes meeting the technical criteria and for which expenditure is reported in App21.

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 with our submission. 5.7 Direct procurement report.

Block E Environmental
Line 7 Length of rivers improved as a result of WINEP Water Quality schemes

The actual and forecast length of rivers improved as a result of WINEP Water Quality schemes. Figures entered in this line should be consistent with those recorded in the Environment Agency's 2020-25 WINEP spreadsheet. "Improved" shall have the same meaning as in the Environment Agency's technical guidance document "Completing the WINEP spreadsheet supplementary guidance: Environmental outcomes", November 2017. For transparency to customers and for regulatory confidence, companies should use the environmental outcome data in WINEP3 if they have an ODI for WINEP delivery.

We have assumed here that this line should include both our NEP (Wales) and WINEP (England) schemes.

Both 2018-19 and 2019-20 include the concluded schemes that result in an improvement to the river as stated by EA/NRW on their NEPs. These figures are for the km of river improved as stated by the NEP that relate to schemes delivered and predicted still to be delivered during AMP6.

The 2020-2025 figures relate to the schemes that will be delivered as part of NEP/WINEP to improve river water quality and have been calculated by the EA/NRW. This line states the Length of river improved as quoted in the NEP/WINEP and stated as required to be achieved by the completion date given the NEP/WINEP and is discussed within the 5.8F Water Quality

Please note we have overwritten the decimal point compliance for the cells shown below as rounding's were causing the total to show an additional kilometre of improvement to that which we had agreed in the NEP.

2020-21	2021-22	2022-23	2023-24	2024-25	Total
0	4.8	20	0	269.6	294.4

Line 8 Greenhouse gas emissions from wastewater operations

The actual and forecast measurement of the annual operational GHG emissions from the company's wastewater operations.

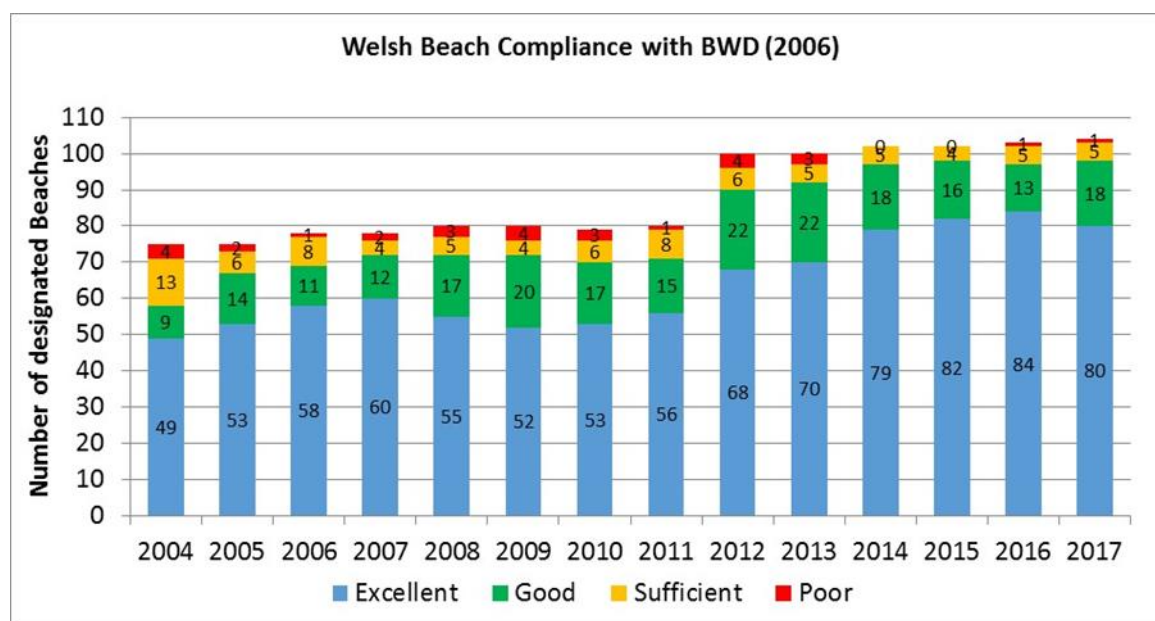
We are proposing a year on year energy consumption reduction that is supported by the 5.8T Energy investment case

Until 2017-18 our operational carbon emissions were dominated by energy consumption from the grid. Our carbon emissions fell by 71%% percent to 62 ktCO₂ (from 212kt in 2016-17) against an internal target for 196 ktCO₂ by 2020. This dramatic fall is largely due to a change in our electricity supply contract which changed on 1st April 2017 to Orsted which provides supply of "REGO backed" electricity. The REGO (Renewable Energy Guarantees of Origin) enables a company to show named sources for all its electricity and declare these supplies as being carbon free.

Line 9 Number of designated coastal bathing waters passing EU standards

The actual and forecast number of designated coastal bathing waters assessed as 'Sufficient' or better according to the classification system set out in Schedule 5 of the Bathing Water Regulations 2013 (Statutory Instrument No.1675).

Numbers of bathing waters passing the minimum standard have remained high (98.5%) and consistent (within the range 96% to 100%) since 2012 and at least 98% since implementation of the directive in 2015. Improvements in the number passing since 2012 are largely the result of wet summers, dropping from the assessment period in 2014 and 2015. Higher rainfall in future could cause a reduction in the number of passing bathing waters to 2012 levels. Although this is partly mitigated by recent investment in AMP5 and AMP6, the effects of diffuse runoff from agriculture remain a threat to compliance with the minimum bathing water standard at a number of sites in Wales, especially Cemaes, Rhyl and New Quay Traeth Gwyn.



Class	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Excellent	49	53	58	60	55	52	53	56	68	70	79	82	84	80	
Good	9	14	11	12	17	20	17	15	22	22	18	16	13	18	
Sufficient	13	6	8	4	5	4	6	8	6	5	5	4	5	5	
Poor	4	2	1	2	3	4	3	1	4	3	0	0	1	1	
Total	75	75	78	78	80	80	79	80	100	100	102	102	103	104	
percent pass	94.7	97.3	98.7	97.4	96.3	95.0	96.2	98.8	96.0	97.0	100	100	99.0	99.0	
Average Percent pass	96.8								98.5						

Line 10 Percentage discharge permit compliance (STW and WTW discharges compliant with numeric permits)

The actual and forecast performance of sewerage service and water service assets to treat and dispose of wastewater in line with the discharge permit conditions imposed on, respectively, sewerage treatment works and water treatment assets for the water supply service. Figures should be input on a calendar year basis. Calculation should follow the methodology set out on page 5 of the Environment Agency's Environmental Performance Assessment (EPA) Methodology v2, February 2017.

There is no change by NRW and EA to the methodology for the calculation of percentage discharge compliance - currently set out in the Environment Agency's Water & Sewerage Company Environmental Performance Assessment (EPA) Methodology (version 3), November 2017.

The methodology required in the guidance notes references the Environmental Performance Assessment (EPA) Methodology (version 2), February 2017. It is assumed that this is a mistake and should refer to the more up-to-date version 3 document from November 2017 as stated in the guidance for App31 Line 10.

We have previously reported the percentage of sewerage treatment works compliance in our PR14 Measure of Success B2: Treating Used Water. This line goes further and includes water treatment works in the calculation.

The discharge permit compliance target identified in Table WWS18 for 2020-2025 is 100%. This is consistent with regulatory requirements to be compliant with discharge numeric permit requirements.

Block F Bill impacts

Line 11 Change in the average residential customer wastewater bill over the period

The change in the average residential customer wastewater bill over the period between 2024-25 and 2019-20 based on wastewater bills calculated in 2017-18 prices (FYA CPIH deflated). The calculation of the average residential customer bill should be consistent with the calculation of the average bill as used in Discover Water.

The average residential customer wastewater bill in 2024-25, calculated consistently with the average bill as used in Discover Water, is ~~£250.08~~ ~~£247.21~~ 247.72 (in 2017-18 FYA CPIH deflated prices). This is not the same as the average total bill – water in App7 of ~~£259.18~~ ~~£256.48~~ 255.06 (also FYA CPIH deflated prices) due to the retail component of the latter being calculated as the retail single service revenue for wastewater divided by wastewater only customers in line with the Ofwat financial model. The average residential customer wastewater bill in 2019-20 is ~~£253.03~~ 255.95 (2017-18 FYA CPIH deflated prices) giving a change of ~~-1.16%~~ ~~-2.30%~~ -3.22% over the period.

Block G

Total expenditure (real prices 2017-18 FYA CPIH deflated).

Line 12 Wastewater totex including cash items and atypical expenditure

The actual and forecast total wastewater expenditure (totex) including cash items and atypical expenditure. Totex for 2017-20 is calculated from WWS1 line 36 deflated to the 2017-18 prices using FYA CPIH as contained in App23. Totex for 2020-25 is copied from WWS1 line 36.

Query ref 114 has been acknowledged

It is only the costs for years 2015-16 and 2016-17 that have to be entered as all the later years are calculated cells.

The costs have been inflated to 2017-18 CPIH price base.

The tables have been prepared on the same basis as the CAT tables and includes adjustments made to the reported APR figure as well as principal use adjustment.

The adjustments are as follows:

	Waste	
	2015-16	2016-17
	£m	£m
Waste totex including cash items and atypical expenditure		
Per APR	236.399	289.316
Less grants and contribution not in price control that was not included in 2015-16 reports (as per guidance at that time)	-3.39	
	233.009	289.316
Adjustment for rates relating to retail property	-0.649	
CAT tables	232.36	289.316

Principal use adjustment

Depreciation	0.164	0.875
Financing charge	0.006	0.046
Other operating expenditure	0.170	0.921
Principal use Capex adj	-2.300	-7.652
Revised TOTEX (after CAT and Principal use adjustment)	230.230	282.584
Restated to 2017-18 CPIH	239.421	290.101

The APR tables for AMP 6 will be prepared on a different basis to the business plan tables regarding principal use. The APR only includes principal use in table 2A segmental income statement and not in the totex price control units (which is prepared on a causal basis). We have made Ofwat aware of this and they have included this in their query feedback.

The principal use adjustment included in table 2A APR has been prepared on an accelerated depreciation basis (i.e. full cost recharge) whereas the business plan tables use depreciation and financing charge incurred in the year.

Line 13 Total number of residential and business customers who receive a wastewater bill

The actual and forecast number of residential and business wastewater customers who receive a bill. This is a calculated line from the sum of WWS3 lines 5 and 8.

2015-16 and 2017-18 cells have been populated from previously submitted APR tables 2f and 2h. All other cells in this line are calculated.

Line 14 Amount of planned wastewater investment per customer billed

The actual and forecast planned total wastewater expenditure per customer. This is calculated from taking the total wastewater expenditure in WWS18 line 12 multiplied by 1000, divided by the total number of customers who receive a wastewater bill in WWS18 line 13.

This is a calculated line.

WWn5 - Wholesale revenue projections for the wastewater network plus price control

Table Validation

There are no validation errors in this table

This table includes all revenue expected by provision of our wholesale wastewater network plus activities at 2017-18 financial year average prices.

Line Commentary

Lines 1 - 12

These lines contain the wholesale revenue requirement aggregated by building blocks. The line in each sub-control tables Wr3, Wn3, WWn5 and Bio4 are calculated in the Ofwat financial model. The lines in App17 are calculated lines from the individual income recorded in the sub-control tables Wholesale revenue projections for the price controls: Wr3, Wn3, WWn5 and Bio4.

Line 1 PAYG ~ wholesale wastewater network plus

*Projected total pay as you go (PAYG) for wholesale wastewater network plus costs. Equals WWS1 line 21 * WWn6 line 14.*

Calculated.

Line 2 Pension deficit repair contributions ~ wholesale wastewater network plus

Projected total cost of pension deficit repair contributions for wholesale wastewater network plus.

In line with information notice IN 13-17 the final revenue allowance for pension deficit repair will be applied in 2019-20. We have not included a contribution from customers toward the pension deficit repair costs included in the plan during 2020-25. The company will bear the costs of the pension deficit repair costs included in WS1 and WWS1.

Line 3 Run off on post 2020 investment ~ wholesale wastewater network plus

Projected run off (depreciation charge) on post 2020 wholesale wastewater network plus totex additions incurred in the 2020-25 period and not recovered through PAYG.

These values are calculated in the Ofwat financial model.

Line 4 Return on post 2020 investment ~ wholesale wastewater network plus

Projected return on post 2020 wholesale wastewater network plus totex additions incurred in the 2020-25 period and not recovered through PAYG.

These values are calculated in the Ofwat financial model.

Line 5 Run off on RPI inflated 2020 RCV ~ wholesale wastewater network plus

Projected run off (depreciation charge) on the proportion of the RCV at 1 April 2020 indexed by RPI.

These values are calculated in the Ofwat financial model.

Line 6 Return on RPI inflated 2020 RCV ~ wholesale wastewater network plus

Projected return on the proportion of the RCV at 1 April 2020 indexed by RPI.

These values are calculated in the Ofwat financial model.

Line 7 Run off on CPIH inflated 2020 RCV ~ wholesale wastewater network plus

Projected run off (depreciation charge) on the proportion of the RCV at 1 April 2020 indexed by CPIH.

These values are calculated in the Ofwat financial model.

Line 8 Return on CPIH inflated 2020 RCV ~ wholesale wastewater network plus

Projected return on the proportion of the RCV at 1 April 2020 indexed by CPIH.

These values are calculated in the Ofwat financial model.

Line 9 Current tax ~ wholesale wastewater network plus

Forecast current tax payable for wholesale wastewater network plus.

These values are calculated in the Ofwat financial model and are nil for all wholesale price controls as the business generates a taxable loss in each year of the price control driven by capital allowances (see App29 – Wholesale tax).

Line 10 Re-profiling of allowed revenue ~ wholesale wastewater network plus

The impact of re-profiling the wholesale wastewater network plus allowed revenue.

We have used the revenue re-profiling functionality in the Ofwat financial model to re-profile revenue on an NPV neutral basis to deliver a total combined residential bill which is broadly constant in real terms between 2020-21 and 2024-25. This is in line with a clear customer preference for a more or less constant bill profile evidenced on page 40 of the PR19 Customer Engagement: Bills and affordability research ref 1.1D.

We have used the revenue re-profiling functionality in the Ofwat financial model to re-profile revenue on an NPV neutral basis to deliver a total combined residential bill declines over AMP7 in real terms between 2020-21 and 2024-25 (see WSH.DD.OO.4 Social Tariffs).

Line 11 PR14 reconciliation revenue adjustments ~ wholesale wastewater network plus

The PR14 reconciliation revenue adjustments associated with wholesale wastewater network plus.

These values are obtained from the revenue adjustment feeder model and are profiled across 2020-21 to 2014-25 on a constant annuity basis.

Wastewater Network Plus revenue adjustments (17-18 CPIH deflated prices)	2020-2021 £m	2021-2022 £m	2022-2023 £m	2023-2024 £m	2024-2025 £m
End of Period ODIs	2.533	2.533	2.533	2.533	2.533
Totex	-1.751	-1.751	-1.751	-1.751	-1.751
WRFIM	0.407	0.407	0.407	0.407	0.407
Blind year	-0.215	-0.215	-0.215	-0.215	-0.215
Total Revenue Adjustments	0.974	0.974	0.974	0.974	0.974

Wastewater Network Plus revenue adjustments (17-18 CPIH deflated prices)	2020-2021 £m	2021-2022 £m	2022-2023 £m	2023-2024 £m	2024-2025 £m
End of Period ODIs	2.519	2.519	2.519	2.519	2.519
Totex	-0.771	-0.771	-0.771	-0.771	-0.771
WRFIM	-2.344	-2.344	-2.344	-2.344	-2.344
Blind year	-0.217	-0.217	-0.217	-0.217	-0.217
Total Revenue Adjustments	-0.753	-0.753	-0.753	-0.753	-0.753

Line 12 Total wholesale wastewater network plus revenue requirement

The company's projected total wholesale wastewater network plus revenue requirement. Equals the sum of WWn5 lines 1 to 11.

2020-21 to 2024-25 are calculated cells in 2017-18 FYA (CPIH) deflated price base.

2019-20 Value input in Outturn (nominal price base).

Revenue requirement for 2019-20

The FD14 revenue requirement was set at the wholesale level and, therefore, needs to be split for input into tables Wn5 Wholesale wastewater network plus and Bio4 Bioresources. For the purposes of completing this cell we have calculated the revenue requirement for 2019-20 from WWS13 and the FD14 financial model as shown in the table below. This calculation ensures that the 2019-20 Revenue Requirement is comparable to the Revenue Requirement calculation for PR19 in the years 2020-21 to 2024-25. The wholesale wastewater revenue requirement for 2019-20 has then been split between the sub-controls in proportion to the AMP7 weighted average split of revenue requirement also shown in the table below. This gives an outturn wholesale wastewater revenue requirement of ~~£406.728m~~ **£406.727m** which has been split ~~91.1%~~ **90.88%** Wastewater network plus and ~~8.9%~~ **9.12%** Bioresources to give outturn revenue requirement for 2019-20 of ~~£370.366m~~ **£369.631m** for Wastewater network plus and ~~£36.361m~~ **£37.097m** for Bioresources.

Wholesale Wastewater									
WWS13	Wholesale wastewater	2019-20							
12	Allowed Revenue	413.418							
25	G&C actual		7.366						
26	G&C over recovery		0.565						
calc (25-26)	G&C allowed	-6.801							
Fin Mod (FD14)	Other income (inc 3rd party)		0.092	<Waste Real AR> row 56: Other income (incl 3rd party income)					
			1.198	Inflate 12-13 to 19-20 outturn					
	3rd Party income	0.11							
	Revenue Requirement	406.728							
A12 (2019-20)	Split of FD14 19-20 Rev Req								
Bio4	A12 (2019-20)	36.361	8.90%						
WWn5	A12 (2019-20)	370.366	91.10%						
		406.728							
	Revenue Requirement (£m)			20-21	21-22	22-23	23-24	24-25	20-25
Bio4 Line 12	Bio resources	35	35	35	34	34	174		
WWn5 Line 12	Wastewater network plus	346	350	354	360	365	1,774		
	Revenue Requirement	381	385	389	394	399	1,948		
		9.20%	9.10%	9.00%	8.80%	8.60%	8.90%		
		90.80%	90.90%	91.00%	91.20%	91.40%	91.10%		
Wholesale Wastewater									
WWS13	Wholesale wastewater	2019-20							
12	Allowed Revenue	413.418							
25	G&C actual		9.051						
26	G&C over recovery		2.250						
calc (25-26)	G&C allowed	-6.801							
Fin Mod (FD14)	Other income (inc 3rd party)		0.092	<Waste Real AR> row 56: Other income (incl 3rd party income)					
			1.198	Inflate 12-13 to 19-20 outturn					
	3rd Party income	0.110							
	Revenue Requirement	406.727							
A12 (2019-20)	Split of FD14 19-20 Rev Req								
Bio4	A12 (2019-20)	37.097	9.12%						
WWn5	A12 (2019-20)	369.630	90.88%						
		406.727							

	Revenue Requirement (£m)	20-21	21-22	22-23	23-24	24-25	20-25
-Bio4 Line 12	-Bio-resources	35.44	35.59	35.76	35.62	35.82	178.24
-WWn5 Line 12	-Wastewater network plus	348.70	351.93	355.10	358.57	361.65	1775.95
	-Revenue Requirement	384.14	387.53	390.86	394.19	397.47	1954.19
		9.23%	9.18%	9.15%	9.04%	9.01%	9.12%
		90.77%	90.82%	90.85%	90.96%	90.99%	90.88%

Lines 13 – 19

These lines contain the “miscellaneous” income received by the appointed business. The lines in App17 are calculated lines from the individual income recorded in the sub-control tables Wholesale revenue projections for the price controls: Wr3, Wn3, WWn5 and Bio4. The total position and the entries in each of these tables together with the method of allocation is shown in Annex 1 at the end of this commentary. For ease of reference these tables are repeated at the end of the commentaries for each of the revenue projections tables.

Line 13 Third party revenue ~ wastewater network plus

Projected third party revenue covered by the wholesale wastewater network plus price control. Appendix 1 of RAG4.07 provides further information on the income to be categorised as third party. This category is for non-potable water so there is no income in this line in the wastewater service.

Line 14 Bulk supplies ~ wastewater network plus

Income from bulk supplies (for wastewater) to another wastewater undertaker.
Income from wastewater bulk supplies has been allocated 50:50 between wastewater network plus and the bioresources sub-control as the income is very small (c£30k).

Line 15 Not used.

Line 16 Rechargeable works ~ wastewater network plus

Rechargeable works, as listed in Appendix 1 of RAG4.07.
All rechargeable works income for wholesale wastewater has been allocated to the wastewater network plus control.

Line 17 Other non-price control third party services ~ wastewater network plus

All other non-price control income for third party services e.g. excluded charges, as listed in Appendix 1 of RAG4.07.
No other 3rd party income is forecast for wastewater network plus sub-control.

Line 18 Total non-price control income (third party services) ~ wastewater network plus

Projected total income from third party services outside of the wholesale wastewater network plus price control. Equals the sum of WWn5 lines 14 to 17.
Calculated.

Line 19 Wholesale wastewater network plus non-price control income (principal services)

Projected income from principal services for which costs are not covered by the wholesale wastewater network plus price control e.g. recreational use of protected land, as listed in Appendix 1 of RAG4.07.

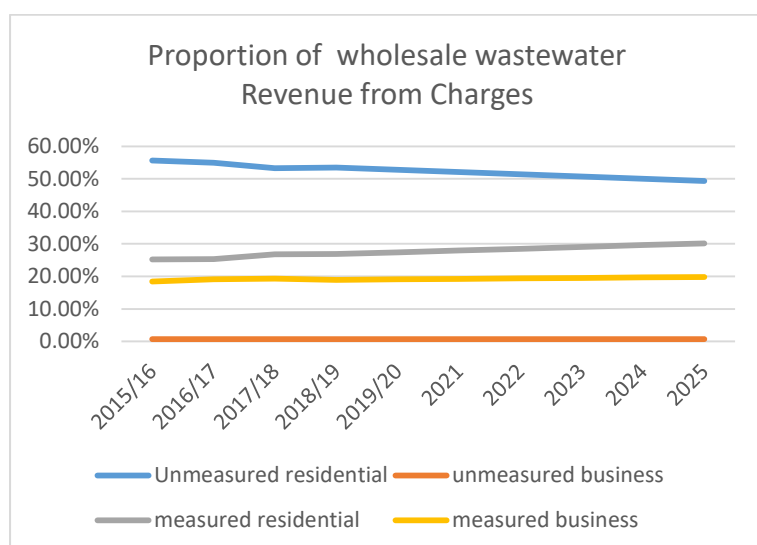
This is the rental income from mobile phone masts on appointed assets land. The income is allocated to sub-control in proportion to weighted average site income from 2015-16 to 2017-18.

Line 20 – 23 wastewater network plus charges (business & residential)

The proportional allocation of the projected wholesale wastewater network plus allowed revenue to unmeasured residential customers (line 20) unmeasured business customers (line 21), measured residential customers (line 22) measured business customers (line 23), from wholesale wastewater network plus charges.

Wholesale wastewater change in proportion of residential revenue due to meter optants and new connections is calculated to be 0.7% from unmeasured residential which moves to 0.55% to measured wastewater and 0.15% to measured business. Unmeasured business remains static. It is assumed that the revenue from network plus and bioresources charges change by the same amount annually.

The tables in Annex 2 show the analysis behind these forecasts. The level of recovery from 2015-16 to 2024-25 is shown in the graph below.



Line 24 Total wholesale wastewater network plus allowed revenue

Projected total wholesale wastewater network plus allowed revenue from wholesale wastewater network plus charges. Charges income should be equal to building blocks income less price control income from other sources. Equals WWn5 line 11 minus line 12.

Calculated.

Line 25 Wastewater network **operating expenditure** plus grants and contributions (price control)

Projected grants and contributions covered by the wholesale wastewater network plus price control. This represents the wholesale wastewater network plus element of the total grants and contributions received for the wholesale wastewater service contained in App28 lines 7 to 10.

Projected operating expenditure grants and contributions covered by the wholesale wastewater network plus price control. The sum of lines 25 and 26 represents the wholesale wastewater network plus element of the total grants and contributions received for the wholesale wastewater service contained in App28 lines 24 to 26.

All grants or contributions within the price control have been allocated to the wastewater network plus control.

Line 26 Wastewater network **capital expenditure** grants and contributions (price control)

Projected capital expenditure grants and contributions covered by the wholesale wastewater network plus price control. The sum of lines 25 and 26 represents the wholesale wastewater network

plus element of the total grants and contributions received for the wholesale wastewater service contained in App28 lines 24 to 26.

All grants or contributions within the price control have been allocated to the wastewater network plus control.

Line 26~~7~~ Wastewater network operating expenditure ~~plus~~ grants and contributions (non-price control)

~~Projected grants and contributions not covered by the wholesale wastewater network plus price control. This represents the wholesale wastewater network plus element of the total 'other' non-price control grants and contributions received for the wholesale wastewater service contained in App28 line 12.~~

Projected operating expenditure grants and contributions not covered by the wholesale wastewater network plus price control. The sum of lines 27 and 28 represents the wholesale wastewater network plus element of the total 'other' non-price control grants and contributions received for the wholesale wastewater service contained in App28 line 28.

All non-price control contributions are expected for services provided by the wastewater network plus control. No grants have been forecast to be received.

Line 28 Wastewater network capital expenditure grants and contributions (non-price control)

Projected capital expenditure grants and contributions not covered by the wholesale wastewater network plus price control. The sum of lines 27 and 28 represents the wholesale wastewater network plus element of the total 'other' non-price control grants and contributions received for the wholesale wastewater service contained in App28 line 28.

All grants or contributions within the price control have been allocated to the wastewater network plus control.

Line 29 Total revenue ~ wholesale wastewater network plus control

Projected total wholesale wastewater network plus revenue requirement for the wholesale wastewater network plus price control including projected grants and contributions covered by the wholesale wastewater network plus price control. Equals WWn5 line 12 minus line 18 minus line 19 plus line 25.

Calculated.

Annex 1 Lines 13 – 19 and 25 & 26

The total “miscellaneous” income in the Business plan is shown in the Summary table below:

Year ending Mar	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
2017-18 FYA (CPIH deflated)					
Summary					
Total Grants & Contributions (price control)	21.36	21.589	21.809	21.88	21.92
Total Grants & Contributions (non-price control)	<u>3.04</u>	<u>1.185</u>	<u>1.198</u>	<u>1.201</u>	<u>1.204</u>
Total Grants & Contributions	24.4	22.774	23.007	23.081	23.124
Total Other Income (price control)	6.477	6.477	6.477	6.477	6.477
Total Other Income (non-price control)	<u>18.049</u>	<u>18.069</u>	<u>18.088</u>	<u>18.108</u>	<u>18.128</u>
Total Other income	24.526	24.546	24.565	24.585	24.605
Price control income	27.837	28.066	28.286	28.357	28.397
Non-price control	<u>21.089</u>	<u>19.254</u>	<u>19.286</u>	<u>19.31</u>	<u>19.333</u>
Total "miscellaneous" income	48.927	47.319	47.573	47.667	47.729

Year ending Mar	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
2017-18 FYA (CPIH deflated)					
Summary					
Total Grants & Contributions (price control)	21.360	21.589	21.809	21.880	21.920
Total Grants & Contributions (non-price control)	<u>3.040</u>	<u>1.185</u>	<u>1.198</u>	<u>1.201</u>	<u>1.204</u>
Total Grants & Contributions	24.400	22.774	23.007	23.082	23.124
Total Other Income (price control)	6.477	6.477	6.477	6.477	6.477
Total Other Income (non-price control)	<u>18.040</u>	<u>18.060</u>	<u>18.080</u>	<u>18.099</u>	<u>18.120</u>
Total Other income	24.517	24.537	24.557	24.576	24.596
Price control income	27.837	28.066	28.286	28.357	28.397
Non-price control	<u>21.080</u>	<u>19.245</u>	<u>19.278</u>	<u>19.301</u>	<u>19.324</u>
Total "miscellaneous" income	48.918	47.311	47.564	47.658	47.720

The individual lines for App 17 and the method of apportionment between the sub-controls (and reported in tables Wr3, Wn3, WWn5, Bio4) are shown in the tables below:

	Year ending Mar	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m	Apportionment to sub-controls
		2017-18 FYA (CPIH deflated)					
B	Wholesale - other price control income						
13	Third party revenue						
	<u>Consists of non-potable water (not bulk supplies):</u>						
	Band A Raw <50 MI						
	Band A Partial < 50MI						
	Band B Raw >50 MI						
	Band B Partial >50 MI						
	Special agreements – (WSHNONPOT9, 10a and 10b)						
Wr3	Third party revenue	-2.824	-2.824	-2.824	-2.824	-2.824	Split as per cost attribution model informing Scheme of Charges
Wn3	Third party revenue	-3.653	-3.653	-3.653	-3.653	-3.653	Split as per cost attribution model informing Scheme of Charges
WWn5	Third party revenue	-	-	-	-	-	
Bio4	Third party revenue	-	-	-	-	-	
App17	Third party revenue	-6.477	-6.477	-6.477	-6.477	-6.477	
C	Non-price control income (third party)						
14	Bulk supplies						
	<u>Consists of:</u>						
	Bulk supplies water						
	Bulk supplies wastewater						
Wr3	Bulk supplies	-8.174	-8.174	-8.174	-8.174	-8.174	Split as per cost attribution model informing Scheme of Charges
Wn3	Bulk supplies	-0.396	-0.396	-0.396	-0.396	-0.396	Split as per cost attribution model informing Scheme of Charges
WWn5	Bulk supplies	-0.015	-0.015	-0.015	-0.015	-0.015	Split 50:50 (not material)
Bio4	Bulk supplies	-0.015	-0.015	-0.015	-0.015	-0.015	Split 50:50 (not material)
App17	Bulk supplies	8.601	8.601	8.601	8.601	8.601	
16	Rechargeable works						
	<u>Consists of:</u>						
	Fire hydrants						
	Repair of damage to Co apparatus						
	Build over sewers						
	Installing meter on unmeasured (Non-household)						
	Trade effluent consent revision						
	Non-primary charges from wholesale service centre						
	Provision of plan information of underground assets						
	Flow and pressure testing of customer supply						
	Meter testing						

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	Year ending Mar	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m	Apportionment to sub-controls
		2017-18 FYA (CPIH deflated)					
	<i>Relocating household meter</i>						
	<i>Private sewer cleaning</i>						
	<i>Disconnection / reconnection of supply</i>						
Wr3	Rechargeable works	-	-	-	-	-	
Wn3	Rechargeable works	-0.473	-0.473	-0.473	-0.473	-0.473	All allocated to network plus
WWn5	Rechargeable works	-0.464	-0.464	-0.464	-0.464	-0.464	All allocated to network plus
Bio4	Rechargeable works	-	-	-	-	-	
App17	Rechargeable works	-0.937	-0.937	-0.937	-0.937	-0.937	
17	Other non-price control (third party services)						
	<u>Consists of "Excluded" charges (Li.Con B)</u>						
	<i>s20 Reservoir operating agreements (NRW)</i>						
	<i>s20 Reservoir operating agreements (additional capex) (NRW)</i>						
	<i>Stand pipes</i>						
	<i>Water tanks & water tankers</i>						
	<i>Reception and disposal of waste (costs& income in non-appointed)</i>						
Wr3	Other non-price control (third party services)	-7.607	-7.627	-7.647	-7.667	-7.687	s20 allocated 100% to Water Resources
Wn3	Other non-price control (third party services)	-0.026	-0.026	-0.026	-0.026	-0.026	Tankers allocate 100% to network plus
WWn5	Other non-price control (third party services)	-	-	-	-	-	
Bio4	Other non-price control (third party services)	-	-	-	-	-	
App17	Other non-price control (third party services)	-7.633	-7.653	-7.672	-7.692	-7.712	
18	Total non-price control income (third party services)						
Wr3	Total non-price control income (third party services)	15.782	15.801	15.821	15.841	15.861	
Wn3	Total non-price control income (third party services)	0.894	0.894	0.894	0.894	0.894	
WWn5	Total non-price control income (third party services)	0.48	0.48	0.48	0.48	0.48	
Bio4	Total non-price control income (third party services)	0.015	0.015	0.015	0.015	0.015	
App17	Total non-price control income (third party services)	17.171	17.191	17.21	17.23	17.25	
D	Non-price control income (principal services)						
19	Other non-price control (principal services)						
	<u>Consists of:</u>						
	<i>Rental income (mobile phone masts, wind turbines, solar panels))</i>						
Wr3	Other non-price control (principal services)	0.494	0.494	0.494	0.494	0.494	Allocated in proportion to weighted average site income from 15/16 to 17/18
Wn3	Other non-price control (principal services)	0.07	0.07	0.07	0.07	0.07	Allocated in proportion to weighted average site income from 15/16 to 17/18
WWn5	Other non-price control (principal services)	0.152	0.152	0.152	0.152	0.152	Allocated in proportion to weighted average site income from 15/16 to 17/18
Bio4	Other non-price control (principal services)	0.161	0.161	0.161	0.161	0.161	Allocated in proportion to weighted average site income from 15/16 to 17/18
App17	Other non-price control (principal services)	0.878	0.878	0.878	0.878	0.878	

Welsh Water Wholesale Water Network Business Plan Commentaries

		Year ending Mar	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m	Apportionment to sub-controls
			2017-18 FYA (CPIH deflated)					
F	Grants & Contributions							
25	Wholesale grants and contributions (price control)							
	<u>Consists of capital income:</u>							
	Infrastructure charges							
	Requisitions and self-lay							
	Connection charges (s45—Water)							
	Diversions							
Wr3	Wholesale grants and contributions (price control)		-	-	-	-	-	
Wn3	Wholesale grants and contributions (price control)		12.789	12.939	13.084	13.127	13.155	All allocated to network plus
WWn5	Wholesale grants and contributions (price control)		8.571	8.650	8.725	8.753	8.765	All allocated to network plus
Bio4	Wholesale grants and contributions (price control)		-	-	-	-	-	
App17	Wholesale grants and contributions (price control)		21.360	21.589	21.809	21.880	21.920	
26	Wholesale grants and contributions (non-price control)							
	<u>Consists of capital income:</u>							
	Sewer vetting, adoption agreements (PR19)							
	Feasibilities							
	Grants							
Wr3	Wholesale grants and contributions (non-price control)		1.868	-	-	-	-	Non-grant income allocated to network plus, Grant income allocated by scheme
Wn3	Wholesale grants and contributions (non-price control)		0.053	0.053	0.053	0.053	0.053	As above
WWn5	Wholesale grants and contributions (non-price control)		1.119	1.132	1.145	1.148	1.151	As above
Bio4	Wholesale grants and contributions (non-price control)		-	-	-	-	-	As above
App17	Wholesale grants and contributions (non-price control)		3.040	1.185	1.198	1.201	1.204	

Welsh Water Wholesale Water Network Business Plan Commentaries

		Year ending Mar	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m	Apportionment to sub-controls
				2017-18 FYA (CPIH deflated)				
B	Wholesale - other price control income							
13	Third party revenue							
	<u>Consists of non-potable water (not bulk supplies):</u>							
	<i>Band A Raw <50 MI</i>							
	<i>Band A Partial < 50MI</i>							
	<i>Band B Raw >50 MI</i>							
	<i>Band B Partial >50 MI</i>							
	<i>Special agreements – (WSHNONPOT9, 10a and 10b)</i>							
Wr3	Third party revenue		2.824	2.824	2.824	2.824	2.824	Split as per cost attribution model informing Scheme of Charges
Wn3	Third party revenue		3.653	3.653	3.653	3.653	3.653	Split as per cost attribution model informing Scheme of Charges
WWn5	Third party revenue		-	-	-	-	-	
Bio4	Third party revenue		-	-	-	-	-	
App17	Third party revenue		6.477	6.477	6.477	6.477	6.477	
C	Non-price control income (third party)							
14	Bulk supplies							
	<u>Consists of:</u>							
	<i>Bulk supplies water</i>							
	<i>Bulk supplies wastewater</i>							
Wr3	Bulk supplies		8.174	8.174	8.174	8.174	8.174	Split as per cost attribution model informing Scheme of Charges
Wn3	Bulk supplies		0.396	0.396	0.396	0.396	0.396	Split as per cost attribution model informing Scheme of Charges
WWn5	Bulk supplies		0.015	0.015	0.015	0.015	0.015	Split 50:50 (not material)
Bio4	Bulk supplies		0.015	0.015	0.015	0.015	0.015	Split 50:50 (not material)
App17	Bulk supplies		8.600	8.600	8.600	8.600	8.600	
16	Rechargeable works							
	<u>Consists of:</u>							
	<i>Fire hydrants</i>							
	<i>Repair of damage to Co apparatus</i>							
	<i>Build over sewers</i>							
	<i>Installing meter on unmeasured (Non-household)</i>							
	<i>Trade effluent consent revision</i>							
	<i>Non-primary charges from wholesale service centre</i>							
	<i>Provision of plan information of underground assets</i>							
	<i>Flow and pressure testing of customer supply</i>							
	<i>Meter testing</i>							
	<i>Relocating household meter</i>							

Welsh Water Wholesale Water Network Business Plan Commentaries

	Year ending Mar	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m	Apportionment to sub-controls
		2017-18 FYA (CPIH deflated)					
	<i>Private sewer cleaning</i>						
	<i>Disconnection / reconnection of supply</i>						
Wr3	Rechargeable works	-	-	-	-	-	
Wn3	Rechargeable works	0.473	0.473	0.473	0.473	0.473	All allocated to network plus
WWn5	Rechargeable works	0.464	0.464	0.464	0.464	0.464	All allocated to network plus
Bio4	Rechargeable works	-	-	-	-	-	
App17	Rechargeable works	0.937	0.937	0.937	0.937	0.937	
17	Other non-price control (third party services)						
	<i>Consists of "Excluded" charges (Li.Con B)</i>						
	<i>s20 Reservoir operating agreements (NRW)</i>						
	<i>s20 Reservoir operating agreements (additional capex) (NRW)</i>						
	<i>Stand pipes</i>						
	<i>Water tanks & water tankers</i>						
	<i>Reception and disposal of waste (costs& income in non-appointed)</i>						
Wr3	Other non-price control (third party services)	7.607	7.627	7.647	7.667	7.687	s20 allocated 100% to Water Resources
Wn3	Other non-price control (third party services)	0.026	0.026	0.026	0.026	0.026	Tankers allocate 100% to network plus
WWn5	Other non-price control (third party services)	-	-	-	-	-	
Bio4	Other non-price control (third party services)	-	-	-	-	-	
App17	Other non-price control (third party services)	7.633	7.653	7.673	7.693	7.713	
18	Total non-price control income (third party services)						
Wr3	Total non-price control income (third party services)	15.782	15.801	15.821	15.841	15.861	
Wn3	Total non-price control income (third party services)	0.894	0.894	0.894	0.894	0.894	
WWn5	Total non-price control income (third party services)	0.480	0.480	0.480	0.480	0.480	
Bio4	Total non-price control income (third party services)	0.015	0.015	0.015	0.015	0.015	
App17	Total non-price control income (third party services)	17.171	17.190	17.210	17.230	17.250	
D	Non-price control income (principal services)						
19	Other non-price control (principal services)						
	<i>Consists of:</i>						
	<i>Rental income (mobile phone masts, wind turbines, solar panels))</i>						
Wr3	Other non-price control (principal services)	0.494	0.494	0.494	0.494	0.494	Allocated in proportion to weighted average site income from 15/16 to 17/18
Wn3	Other non-price control (principal services)	0.070	0.070	0.070	0.070	0.070	Allocated in proportion to weighted average site income from 15/16 to 17/18
WWn5	Other non-price control (principal services)	0.152	0.152	0.152	0.152	0.152	Allocated in proportion to weighted average site income from 15/16 to 17/18
Bio4	Other non-price control (principal services)	0.152	0.152	0.152	0.152	0.152	Allocated in proportion to weighted average site income from 15/16 to 17/18
App17	Other non-price control (principal services)	0.868	0.868	0.868	0.868	0.868	

Welsh Water Wholesale Water Network Business Plan Commentaries

These worksheets present the recalculated grants and contributions calculated in <G&C (outturn) (IAP)> in the format required for the tables Wr3, Wn3 and WWn5. The tables take the outturn (£) values to 17/18 £m values.

	Year ending Mar	units	2021	2022	2023	2024	2025	2021 October submission	2022	2023	2024	2025	2021 Difference	2022	2023	2024	2025
Table Wr3																	
F	Grants & Contributions																
25	Opex G&C (price control)	£m	-	-	-	-	-						-	-	-	-	-
26	Capex G&C (price control)	£m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	Opex G&C (non-price control)	£m	-	-	-	-	-						-	-	-	-	-
28	Capex G&C (non-price control)	£m	(1.868)	-	-	-	-	(1.868)	-	-	-	-	-	-	-	-	-
Table Wn3																	
F	Grants & Contributions																
25	Opex G&C (price control)	£m	(6.955)	(6.876)	(6.798)	(6.722)	(6.648)						Diversions & New Conns (opex) reallocated to G&C (Opex)				
26	Capex G&C (price control)	£m	(5.834)	(6.063)	(6.286)	(6.405)	(6.507)	(12.789)	(12.939)	(13.084)	(13.127)	(13.155)	6.955	6.876	6.798	6.722	6.648
27	Opex G&C (non-price control)	£m	-	-	-	-	-						(6.955)	(6.876)	(6.798)	(6.722)	(6.648)
28	Capex G&C (non-price control)	£m	(0.053)	(0.053)	(0.053)	(0.053)	(0.053)	(0.053)	(0.053)	(0.053)	(0.053)	(0.053)	-	-	-	-	-
Table WWn5																	
F	Grants & Contributions																
25	Opex G&C (price control)	£m	(2.202)	(2.202)	(2.202)	(2.202)	(2.202)						Diversions & New Conns (opex) reallocated to G&C Opex (pc)				
26	Capex G&C (price control)	£m	(6.369)	(6.447)	(6.523)	(6.550)	(6.562)	(8.571)	(8.650)	(8.725)	(8.753)	(8.765)	Adoption Charges reallocated to G&C Opex (non-pc)				
27	Opex G&C (non-price control)	£m	(0.814)	(0.827)	(0.840)	(0.844)	(0.847)						2.202	2.202	2.202	2.202	2.202
28	Capex G&C (non-price control)	£m	(0.305)	(0.305)	(0.305)	(0.305)	(0.305)	(1.119)	(1.132)	(1.145)	(1.148)	(1.151)	(2.202)	(2.202)	(2.202)	(2.202)	(2.202)
Total																	
F	Grants & Contributions																
25	Opex G&C (price control)		(9.158)	(9.078)	(9.001)	(8.925)	(8.850)						9.158	9.078	9.001	8.925	8.850
26	Capex G&C (price control)		(12.203)	(12.510)	(12.808)	(12.955)	(13.069)	(21.360)	(21.589)	(21.809)	(21.880)	(21.920)	(9.158)	(9.078)	(9.001)	(8.925)	(8.850)
27	Opex G&C (non-price control)	£m	(0.814)	(0.827)	(0.840)	(0.844)	(0.847)						0.814	0.827	0.840	0.844	0.847
28	Capex G&C (non-price control)	£m	(2.226)	(0.358)	(0.358)	(0.358)	(0.358)	(3.040)	(1.185)	(1.198)	(1.201)	(1.204)	(0.814)	(0.827)	(0.840)	(0.844)	(0.847)
Total Grants & Contributions			(24.400)	(22.774)	(23.007)	(23.081)	(23.124)	(24.400)	(22.774)	(23.007)	(23.081)	(23.124)	-	-	-	-	-

Annex 2 Analysis for lines 20 to 23 - Current period proportions from the analysis of wholesale revenues

Proportion of annual revenue by Wholesale control

	2015-16	2016-17	2017-18	2018-19	Average
	Measured	Measured	Measured	Measured	Measured
Water					
Household	19.61%	20.69%	21.84%	21.95%	21.02%
Non-Household	26.67%	26.80%	26.46%	27.08%	26.75%
	46%	47%	48%	49%	48%

	2015-16	2016-17	2017-18	2018-19	Average
	Measured	Measured	Measured	Measured	Measured
Wastewater					
Household	25.20%	25.28%	26.75%	26.85%	26.02%
Non-Household	18.47%	19.07%	19.32%	18.95%	18.95%
	44%	44%	46%	46%	45%

	2015-16	2016-17	2017-18	2018-19	Average
	Measured	Measured	Measured	Measured	Measured
Wholesale					
Household	22.85%	23.34%	24.69%	24.78%	23.92%
Non-Household	21.92%	22.33%	22.31%	22.40%	22.24%
	45%	46%	47%	47%	46%

	2015-16	2016-17	2017-18	2018-19	Average
	Unmeasured	Unmeasured	Unmeasured	Unmeasured	Unmeasured
Water					
Household	52.92%	51.73%	50.95%	50.22%	51.46%
Non-Household	0.80%	0.78%	0.74%	0.75%	0.77%
	54%	53%	52%	51%	52%

	2015-16	2016-17	2017-18	2018-19	Average
	Unmeasured	Unmeasured	Unmeasured	Unmeasured	Unmeasured
Wastewater					
Household	55.59%	54.90%	53.23%	53.49%	54.30%
Non-Household	0.74%	0.75%	0.70%	0.70%	0.72%
	56%	56%	54%	54%	55%

	2015-16	2016-17	2017-18	2018-19	Average
	Unmeasured	Unmeasured	Unmeasured	Unmeasured	Unmeasured
Wholesale					
Household	54.46%	53.57%	52.28%	52.11%	53.10%
Non-Household	0.77%	0.76%	0.72%	0.72%	0.74%
	55%	54%	53%	53%	54%

Welsh Water Wholesale Water Network Business Plan Commentaries

Annual Change on proportion

	2015-16	2016-17	2017-18	2018-19	Average
	Measured	Measured	Measured	Measured	Measured
Water					
Household		1.08%	1.16%	0.11%	0.78%
Non-Household		0.12%	-0.33%	0.61%	0.13%

	2015-16	2016-17	2017-18	2018-19	Average
	Measured	Measured	Measured	Measured	Measured
Wastewater					
Household		0.07%	1.47%	0.11%	0.55%
Non-Household		0.60%	0.25%	-0.37%	0.16%

	2015-16	2016-17	2017-18	2018-19	Average
	Measured	Measured	Measured	Measured	Measured
Wholesale					
Household		0.49%	1.35%	0.08%	0.64%
Non-Household		0.41%	-0.01%	0.08%	0.16%

	2015-16	2016-17	2017-18	2018-19	Average
	Unmeasured	Unmeasured	Unmeasured	Unmeasured	Unmeasured
Water					
Household		-1.18%	-0.78%	-0.73%	-0.90%
Non-Household		-0.02%	-0.04%	0.00%	-0.02%

	2015-16	2016-17	2017-18	2018-19	Average
	Unmeasured	Unmeasured	Unmeasured	Unmeasured	Unmeasured
Wastewater					
Household		-0.68%	-1.67%	0.26%	-0.70%
Non-Household		0.00%	-0.05%	0.01%	-0.01%

	2015-16	2016-17	2017-18	2018-19	Average
	Unmeasured	Unmeasured	Unmeasured	Unmeasured	Unmeasured
Wholesale					
Household		-0.90%	-1.29%	-0.17%	-0.79%
Non-Household		-0.01%	-0.05%	0.01%	-0.02%

WWn6 - Cost recovery for wastewater network plus

Table Validation

There are no validation errors in this table

Lines 1 – 14

We have treated the capital value created from post 2020 investment arising from non-PAYG totex the same as the 2020 RCV. We have treated the RPI linked RCV the same and the CPIH linked RCV. We have set the RCV run off rate to match the average expected useful lives of the underlying assets. We have applied the same “natural” RCV run off rate to each of the RPI linked 2020 RCV, CPI linked 2020 RCV and the post 2020 investment. The natural rate of RCV run off remains appropriate for 2025-30 period.

~~As a result we are not accelerating or decelerating the rate of recovery of expenditure added to the RCV between generations of customers.~~

~~For each price control the average expected useful lives have been generated using an assessment of the engineering lives of each asset class and weighted using the gross MEAV.~~

An increase of 0.22% to the natural RCV run off rate has been included to address financeability in the notional company.

Block A Lines 1 -5 RCV run off rate ~ RPI linked RCV

Line 1 “Natural” RCV run off rate

Proposed “natural” RCV run off rates (indexed by RPI) for wholesale wastewater network plus. (The percentage of the RPI linked RCV that is depreciated annually). The “natural RCV rate” is a rate which reflects the economic reality of the expenditure which the company is incurring and the long term nature of its investments.

The average expected useful lives of Wastewater Network Plus assets have been generated using an assessment of the engineering lives of each asset class and weighted using the gross MEAV.

The resulting asset life for wastewater network plus is 32.4 years, corresponding to a “natural” RCV run off rate of 3.09% (reciprocal of asset life) for each year across AMP7 and AMP8.

Line 2 Adjustments to RCV run off rate to address transition from RPI to CPI

Proposed adjustments to the RCV run off rates (indexed by RPI) for wholesale wastewater network plus, that the company considers are required to address issues arising from the transition from RPI to CPIH as the primary inflation index.

We are not proposing an adjustment to the RCV run off rate to address the transition from RPI to CPIH.

Line 3 Other adjustments to RCV run off rate

Proposed other adjustments to the RCV run off rates (indexed by RPI) for wholesale wastewater network plus, that the company wishes to make to enable it address issues such as the smoothing of bills.

~~We are not proposing an adjustment to the RCV run off rate to address other issues. We have smoothed bills within the 2020-25 period on an NPV neutral basis using the functionality in the Ofwat financial model.~~

An increase of 0.22% to the natural RCV run off rate has been included to address financeability in the notional company.

Line 4 Total RCV run off rate to be applied

Proposed total RCV run off rates (indexed by RPI) for wholesale wastewater network plus. Equals the sum of WWn6 lines 1 to 3.

Calculated.

Line 5 Method used to apply run-off rate (straight line or reducing balance)

The method used to apply the RCV run off rates (indexed by RPI) either in a straight line or a reducing balance. (Description of the accounting method used to depreciate the RPI linked RCV). We expect the same method to be used in 2025-30 as for 2020-25.

We have used a reducing balance approach to apply the RCV run off rates.

Block B Lines 6 -10 RCV run off rate ~ CPI-CPI(H) linked RCV

Line 6 "Natural" RCV run off rate

Proposed "natural" RCV run off rates (indexed by CPIH) for wholesale wastewater network plus. (The percentage of the CPI(H) linked RCV that is depreciated annually). The "natural RCV rate" is a rate which reflects the economic reality of the expenditure which the company is incurring and the long term nature of its investments.

The average expected useful lives of Wastewater Network Plus assets have been generated using an assessment of the engineering lives of each asset class and weighted using the gross MEAV.

The resulting asset life for wastewater network plus is 32.4 years, corresponding to a "natural" RCV run off rate of 3.09% (reciprocal of asset life) for each year across AMP7 and AMP8.

Line 7 Adjustments to RCV run off rate to address transition from RPI to CPI

Proposed adjustments to the RCV run off rates (indexed by CPIH) for wholesale wastewater network plus, that the company considers are required to address issues arising from the transition from RPI to CPIH as the primary inflation index.

We are not proposing an adjustment to the RCV run off rate to address the transition from RPI to CPIH.

Line 8 Other adjustments to RCV run off rate

Proposed other adjustments to the RCV run off rates (indexed by CPIH) for wholesale wastewater network plus, that the company wishes to make to enable it address issues such as the smoothing of bills.

~~We are not proposing an adjustment to the RCV run off rate to address other issues. We have smoothed bills within the 2020-25 period on an NPV neutral basis using the functionality in the Ofwat financial model.~~

An increase of 0.22% to the natural RCV run off rate has been included to address financeability in the notional company.

Line 9 Total RCV run off rate to be applied

Proposed total RCV run off rates (indexed by CPIH) for wholesale wastewater network plus. Equals the sum of WWn6 lines 6 to 8.

Calculated.

Line 10 Method used to apply run off rate (straight line or reducing balance)

The method used to apply the RCV run off rates (indexed by CPIH) either in a straight line or a reducing balance. (Description of the accounting method used to depreciate the CPI(H) linked RCV). We expect the same method to be used in 2025-30 as for 2020-25.

We have used a reducing balance approach to apply the RCV run off rates.

Block C Lines 11 -14 PAYG Rate – Wastewater Network Plus

Line 11 “Natural” PAYG rate – wastewater network plus

Proposed “natural” PAYG rates for wholesale wastewater network plus relevant to the wholesale wastewater network plus revenue - totex projected in WWn5. These should be expressed as a percentage of totex forecast in each year. The “natural PAYG rate” is a rate which reflects the economic reality of the expenditure which the company is incurring and the long term nature of its investments.

We have calculated the “natural” PAYG rate as the rate which recovers operating expenditure (inclusive of infrastructure renewal expenditure) in the year that it is incurred and capex net of grants and contributions is added to the RCV and recovered from both current and future customers over time.

The natural PAYG rate is Opex divided by Totex net of grants and contributions calculated on a year by year basis, as follows:

	2020-21	2021-22	2022-23	2023-24	2024-25
Opex (£m) <i>WWS1 line 11</i>	125.2	132.0	132.4	131.2	130.8
Totex (net G&Cs) (£m) <i>WWS1 line 21</i>	331.5	265.4	274.7	264.2	261.7
PAYG rate (%)	37.76%	49.73%	48.21%	49.67%	49.98%

	2025-26	2026-27	2027-28	2028-29	2029-30
Opex (£m)	148.5	146.9	145.4	143.9	142.4
Totex (net G&Cs) (£m)	297.2	294.2	291.0	287.9	284.8
PAYG rate (%)	49.96%	49.95%	49.97%	49.99%	50.00%

	2020-21	2021-22	2022-23	2023-24	2024-25
Opex (£m) <i>WWS1 line 11</i>	132.775	140.640	141.113	139.869	139.132
Totex (net G&Cs) (£m) <i>WWS1 line 21</i>	286.673	260.721	270.065	260.017	257.985
PAYG rate (%)	46.32%	53.94%	52.25%	53.79%	53.93%

Line 12 Adjustments to PAYG rate to address transition from RPI to CPI ~ wastewater network plus

Proposed adjustments to the PAYG rates for wholesale wastewater network plus, that the company considers are required to address issues arising from the transition from RPI to CPIH as the primary inflation index.

We are not proposing an adjustment to the PAYG rate to address the transition from RPI to CPIH.

Line 13 Other adjustments to PAYG rate ~ wastewater network plus

Proposed other adjustments to the PAYG rates for wholesale wastewater network plus, that the company wishes to make to enable it address issues such as the smoothing of bills.

~~We are not proposing an adjustment to the PAYG rate to address other issues. We have smoothed bills within the 2020-25 period on an NPV neutral basis using the functionality in the Ofwat financial model.~~

We have adjusted the natural PAYG rate to address financeability in the notional company.

Line 14 Total PAYG rate ~ wastewater network plus

Proposed total PAYG rates to be applied to wholesale wastewater network plus totex. Equals the sum of WWn6 lines 11 to 13.

Calculated.

WWn8 – Wholesale wastewater network plus special cost factors

Table Validation

There are no validation errors in this table

Overview of the table

~~We are not submitting special factors for Wholesale wastewater network plus price control econometric modelling at this time due to the on-going cost assessment working group.~~

Line 1 Description of special cost claim

Description of costs being put forward for a special cost claim. A separate table block should be filled in for each cost type that has been identified as requiring special treatment (adjustment / exclusion). This description will need to be able to identify the supporting evidence elsewhere in the business plan that sets out the case to the special treatment.

DWMPs will be a new statutory requirement for AMP7. DWMPs represent a step change in the way we have to understand our drainage and wastewater assets as well as the third party systems that interact with them - such as surface water and highways drainage systems. In light of this clear intention from both governments to place DWMPs on a statutory footing – certainly within the AMP7 period Dŵr Cymru must make adequate provision to develop plans that will meet both governments' expectations and inform expenditure in AMP8. This is a significant step up from current expectations. We therefore ask Ofwat to make a suitable allowance in the Final Determination for PR19.

Line 2 Type of special cost claim

Type of special cost claim proposed. This will be one of 'atypically large investment', 'material new costs', 'regional operating circumstances' or 'other (specify)'. See final methodology document for identification of what can be considered as a special cost claim.

A description of the type of cost claim has been provided.

Line 3 Total expenditure used for the purpose of business plan

Company's total expenditure related to the proposed special cost claim. Costs in this line should be consistent with business plan costs and should be gross of any capital contributions or grants. Total expenditure is as set out in the Regulatory Accounting Guidelines.

The total proposed expenditure associated with this cost claim is £13.624m, which aligns with our original business plan submission.

Line 4 Historic total expenditure

Historic total expenditure related to the proposed special cost claim. This should be gross of any capital contributions or grants. Total expenditure is as set out in the Regulatory Accounting Guidelines.

This is a new requirement so there is no historical spend identified.

Bio4 - Wholesale revenue projections for the wastewater bioresources price control

Table Validation

There are no validation errors in this table.

This table includes all revenue expected by DCWW in provision of its wholesale wastewater bioresources activities at 2017-18 financial year average prices.

Line Commentary

Lines 1 12

These lines contain the wholesale revenue requirement aggregated by building blocks. The line in each of the sub-control tables Wr3, Wn3, WWn5 and Bio4 are calculated in the Ofwat financial model. The lines in APP17 are calculated lines from the individual income recorded in the sub-control tables Wholesale revenue projections for the price controls: Wr3, Wn3, WWn5 and Bio4.

Line 1 PAYG

*Projected total pay as you go (PAYG) for wholesale bioresources costs. Equals WWS1 line 21 * Bio5 line 19.*

Calculated.

Line 2 Pension deficit repair contributions

Projected total cost of pension deficit repair contributions for wholesale bioresources.

In line with information notice IN 13-17 the final revenue allowance for pension deficit repair will be applied in 2019-20. We have not included a contribution from customers toward the pension deficit repair costs included in the plan during 2020-25. The company will bear the costs of the pension deficit repair costs included in WS1 and WWS1.

Line 3 Run off on post 2020 investment

Projected run off (depreciation charge) on post 2020 wholesale bioresources totex investment incurred in the 2020-25 period and not recovered through PAYG.

These values are calculated in the Ofwat financial model.

Line 4 Return on post 2020 investment

Projected return on post 2020 wholesale bioresources totex investment incurred in the 2020-25 period and not recovered through PAYG.

These values are calculated in the Ofwat financial model.

Line 5 Run off on RPI inflated 2020 RCV

Projected run off (depreciation charge) on the proportion of the RCV at 1 April 2020 indexed by RPI.

These values are calculated in the Ofwat financial model.

Line 6 Return on RPI inflated 2020 RCV

Projected return on the proportion of the RCV at 1 April 2020 indexed by RPI.

These values are calculated in the Ofwat financial model.

Line 7 Run off on CPIH inflated 2020 RCV

Projected run off (depreciation charge) on the proportion of the RCV at 1 April 2020 indexed by CPIH.

These values are calculated in the Ofwat financial model.

Line 8 Return on CPIH inflated 2020 RCV

Projected return on the proportion of the RCV at 1 April 2020 indexed by CPIH.

These values are calculated in the Ofwat financial model.

Line 9 Current tax ~ wholesale wastewater bioresources

Forecast current tax payable for wholesale bioresources.

These values are calculated in the Ofwat financial model and are nil for all wholesale price controls as the business generates a taxable loss in each year of the price control driven by capital allowances (see App29 – Wholesale tax).

Line 10 Re-profiling of allowed revenue ~ wholesale wastewater bioresources

The impact of re-profiling the wholesale bioresources allowed revenue.

~~We have used the revenue re-profiling functionality in the Ofwat financial model to re-profile revenue on an NPV neutral basis to deliver a total combined residential bill which is broadly constant in real terms between 2020-21 and 2024-25. This is in line with a clear customer preference for a more or less constant bill profile on page 40 of the PR19 Customer Engagement: Bills and affordability research ref 1.1D. There is no re-profiling of revenue within bioresources.~~

We have used the revenue re-profiling functionality in the Ofwat financial model to re-profile revenue on an NPV neutral basis to deliver a total combined residential bill declines over AMP7 in real terms between 2020-21 and 2024-25 (see WSH.DD.OO.4 Social Tariffs).

Line 11 PR14 reconciliation revenue adjustments ~ wholesale water resources

The PR14 reconciliation revenue adjustments associated with wholesale bioresources.

These values are obtained from the revenue adjustment feeder model and are profiled across 2020-21 to 2014-25 on a constant annuity basis. There are no PR14 reconciliation revenue adjustments within bioresources.

Line 12 Total wholesale wastewater bioresources revenue requirement

The company's projected total wholesale bioresources revenue requirement. Equals the sum of Bio4 lines 1 to 11.

2020-21 to 2024-25 calculated cells in 2017-18 FYA (CPIH) deflated price base.

2019-20 Value input in Outturn (nominal price base).

Revenue requirement for 2019-20

The FD14 revenue requirement was set at the wholesale level and, therefore, needs to be split for input into tables Wn5 Wholesale wastewater network plus and Bio4 Bioresources. For the purposes of completing this cell we have calculated the revenue requirement for 2019-20 from WWS13 and the FD14 financial model as shown in the table below. This calculation ensures that the 2019-20 Revenue Requirement is comparable to the Revenue Requirement calculation for PR19 in the years 2020-21 to 2024-25. The wholesale wastewater revenue requirement for 2019-20 has then been split between the sub-controls in proportion to the AMP7 weighted average split of revenue requirement also shown in the table below. This gives an outturn wholesale wastewater revenue requirement of ~~£406.728m~~ **£406.727m** which has been split ~~91.1%~~ **90.88%** Wastewater network plus and ~~8.9%~~ **9.12%** Bioresources to give outturn revenue requirement for 2019-20 of ~~£370.366m~~ **£369.631m** for Wastewater network plus and ~~£36.361m~~ **£37.097m** for Bioresources.

Welsh Water Bioresources Business Plan Table commentaries

Wholesale Wastewater

WWS13	Wholesale wastewater	2019-20		
12	Allowed Revenue	413.418		
25	G&C actual		7.366	
26	G&C over recovery		0.565	
calc (25-26)	G&C allowed	-6.801		
Fin Mod (FD14)	Other income (inc 3rd party)		0.092	<Waste Real AR> row 56: Other income (incl 3rd party income)
			1.198	Inflate 12-13 to 19-20 outturn
	3rd Party income	0.11		
	Revenue Requirement	406.728		
A12 (2019-20)	Split of FD14 19-20 Rev Req			
Bio4	A12 (2019-20)	36.361	8.90%	
WWn5	A12 (2019-20)	370.366	91.10%	
		406.728		

		20-21	21-22	22-23	23-24	24-25	20-25
Bio4 Line 12	Bio resources	35	35	35	34	34	174
WWn5 Line 12	Wastewater network plus	346	350	354	360	365	1,774
	Revenue Requirement	381	385	389	394	399	1,948
		9.20%	9.10%	9.00%	8.80%	8.60%	8.90%
		90.80%	90.90%	91.00%	91.20%	91.40%	91.10%

Wholesale Wastewater

WWS13	Wholesale wastewater	2019-20		
12	Allowed Revenue	413.418		
25	G&C actual		9.051	
26	G&C over recovery		2.250	
calc (25-26)	G&C allowed	-6.801		
Fin Mod (FD14)	Other income (inc 3rd party)		0.092	<Waste Real AR> row 56: Other income (incl 3rd party income)
			1.198	Inflate 12-13 to 19-20 outturn
	3rd Party income	0.110		
	Revenue Requirement	406.727		
A12 (2019-20)	Split of FD14 19-20 Rev Req			
Bio4	A12 (2019-20)	37.097	9.12%	
WWn5	A12 (2019-20)	369.630	90.88%	
		406.727		

		20-21	21-22	22-23	23-24	24-25	20-25
Bio4 Line 12	Bio resources	35.44	35.59	35.76	35.62	35.82	178.24
WWn5 Line 12	Wastewater network plus	348.70	351.93	355.10	358.57	361.65	1775.95
	Revenue Requirement	384.14	387.53	390.86	394.19	397.47	1954.19
		9.23%	9.18%	9.15%	9.04%	9.01%	9.12%
		90.77%	90.82%	90.85%	90.96%	90.99%	90.88%

Lines 13 – 19

These lines contain the “miscellaneous” income received by the appointed business. The lines in APP17 are calculated lines from the individual income recorded in the sub-control tables Wholesale revenue projections for the price controls: Wr3, Wn3, WWn5 and Bio4. The total position and the entries in each of these tables together with the method of allocation is shown in Annex 1 at the end of this commentary. For ease of reference these tables are repeated at the end of the commentaries for each of the revenue projections tables.

Line 13 Third party revenue ~ wholesale wastewater bioresources

Projected third party revenue covered by the wholesale wastewater bioresources price control. Appendix 1 of RAG4.07 provides further information on the income to be categorised as third party.
This category is for non-potable water so there is no income in this line in the wastewater service.

Line 14 Bulk supplies

Income from bulk supplies (bioresources) to another wastewater undertaker.
Income from wastewater bulk supplies has been allocated 50:50 between wastewater network plus and the bioresources sub-control as the income is very small (c£30k).

Line 15 not used

Line 16 Rechargeable works ~ bioresources

Rechargeable works, as listed in Appendix 1 of RAG4.07.
No rechargeable works income relates to services provided from the bioresources sub-control.

Line 17 Other non-price control third party services ~ bioresources

All other non-price control income for third party services e.g. excluded charges, as listed in Appendix 1 of RAG4.07.
No other 3rd party income is forecast for bioresources sub-control.

Line 18 Total non-price control income (third party services) ~ bioresources

Projected total income from third party services outside of the wholesale wastewater bioresources price control. Equals the sum of Bio4 lines 14 to 17.
Calculated.

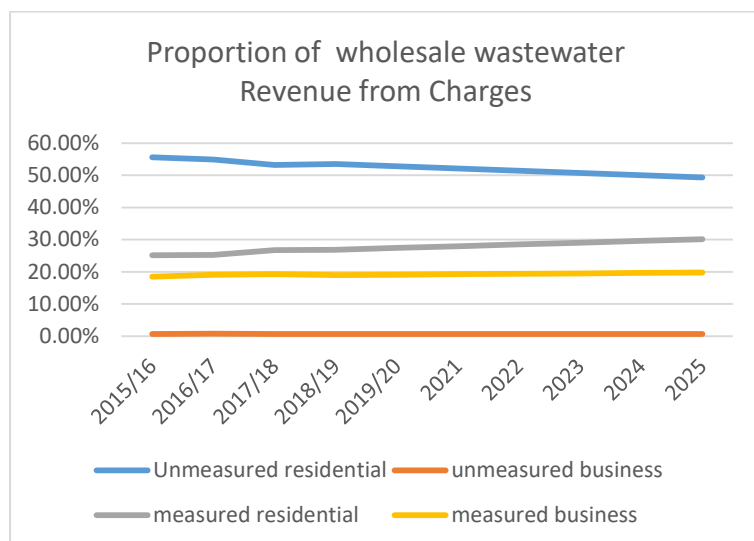
Line 19 Wholesale bioresources non-price control income (principal services)

Projected income from principal services for which costs are not covered by the wholesale wastewater bioresources price control e.g. recreational use of protected land, as listed in Appendix 1 of RAG4.07.
This is the rental income from mobile phone masts on appointed assets land. The income is allocated to sub-control in proportion to weighted average site income from 2015-16 to 2017-18.

Line 20 – 23 Bioresources charges (business & residential)

The proportional allocation of the projected wholesale bioresources allowed revenue to unmeasured residential customers (line 20) unmeasured business customers (line 21), measured residential customers (line 22) measured business customers (line 23), from wholesale bioresources charges.
Wholesale wastewater annual change in proportion of residential revenue due to meter optants and new connections is calculated to be 0.7% from unmeasured residential. This movement is split 0.55% to measured wastewater and 0.15% to measured business. Unmeasured business remains static. It is assumed that the revenue from network plus and bioresources charges change by the same amount annually.

The tables in Annex 2 show the analysis behind these forecasts. The level of recovery from 2015-16 to 2024-25 is shown in the graph below.



Line 24 Total wholesale wastewater bioresources allowed revenue

Projected total wholesale bioresources allowed revenue from wholesale bioresources charges. Charges income should be equal to building blocks income less price control income from other sources. Equals Bio4 line 11 minus line 12.

Calculated.

Line 25 Bioresources grants and contributions (price control)

Projected grants and contributions covered by the wholesale wastewater resources price control. This represents the wholesale wastewater bioresources element of the total grants and contributions received for the wholesale wastewater service contained in App28 lines 7 to 10.

No grants or contributions within the price control are forecast for the bioresources sub-control.

Line 26 Bioresources grants and contributions (non-price control)

Projected grants and contributions not covered by the wholesale wastewater bioresources price control. This represents the wholesale wastewater bioresources element of the total 'other' non-price control grants and contributions received for the wholesale wastewater service contained in App28 line 12.

No non-price control grants or income has been forecast for the bioresources sub-control.

Line 27 Total revenue ~ wholesale wastewater bioresources control

Projected total wholesale wastewater bioresources revenue requirement for the wholesale wastewater bioresources price control including projected grants and contributions covered by the wholesale wastewater bioresources price control. Equals Bio4 line 12 minus line 18 minus line 19 plus line 25.

Calculated.

Line 28

The budgets used to complete table WWS1 has been analysed for variables costs.

Manpower, Transport, Outsourced costs are apportioned 80% fixed and 20% variable. Power has been analysed and the fixed (Daily and DUOS) charge has been identified, the rest is considered variable. Bought in services has been analysed and split between fixed and variable elements

Chemicals and potable water costs are considered 100% variable. This gives the split of costs shown in the table below:

The forecasts used to complete table WWS1 have been analysed for costs that could be considered variable with respect to changes in sludge volumes.

- Manpower, Transport, Outsourced costs are apportioned 80% fixed and 20% variable, reflecting the fact that, whilst these costs are generally fixed at a given level of treatment, there are some costs that would increase or be avoidable at the margin for example overtime;
- Power has been analysed and the fixed element (the Daily and DUOS charge) has been identified, the rest is considered variable;
- Bought in services has been analysed and apportioned between fixed and variable elements: 15% fixed and 85% variable. This weighting has been calculated from the component services where we have assessed the fixed elements to be: 100% of property costs, 25% of fees, 10% of maintenance. The other costs, have been split roughly 50:50 reflecting variable costs for vehicle, plant and skip hire and fixed costs relating to grounds and building maintenance which will not vary annually with sludge volumes; and
- Chemicals and potable water costs are considered 100% variable.

This gives the split of costs shown in the table below:

Table 1 - Split of Totex between Fixed and Variable Costs

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
	£m	£m	£m	£m	£m	£m
Bioresources (inc G&S)	11.2	10.6	10.4	10.5	10.3	10.5
Bioresources (inc G&S)	11.5	10.9	10.7	10.7	10.6	10.8
Power (Fixed charge)	(0.6)	(0.8)	(0.8)	(0.9)	(1.0)	(1.0)
Bought in services	0.9	0.7	0.7	0.7	0.6	0.6
Principal use	1.3	2.0	2.2	2.4	2.4	2.3
Fixed Opex	12.7	12.5	12.5	12.6	12.4	12.4
Fixed Opex	13.0	12.8	12.8	12.8	12.6	12.6
Capital expenditure	30.9	10.6	10.2	10.3	9.8	8.9
Fixed Totex	43.6	23.1	22.7	22.9	22.2	21.3
Fixed Totex	43.8	23.4	23.0	23.2	22.4	21.6
<u>Variable elements</u>						
Bioresources (inc G&S)	1.9	1.6	1.7	1.7	1.6	1.6
Chemicals & water	1.2	1.0	1.0	1.0	1.0	1.0
Bought in services	4.3	3.6	3.7	3.8	3.9	4.0
NEP (Opex from capex)	-	-	0.0	0.1	0.2	0.3
Gross variable total	7.3	6.2	6.4	6.6	6.7	7.0
Power	(2.8)	(3.7)	(3.9)	(4.0)	(4.2)	(4.2)
Variable Totex	4.5	2.5	2.6	2.5	2.5	2.7
Totex	48.0	25.6	25.2	25.5	24.7	24.0
Totex	48.3	25.9	25.5	25.7	25.0	24.3
Sludge produced (ttds pa)	72.6	73.4	74.2	75.1	75.9	76.8

For the completion of line ~~H28~~ **H30** it is considered reasonable to assume that the capital costs and capital expenditure elements of totex are invariant to marginal changes to sludge volumes from the

forecasts used to set the revenue control therefore the fixed element to be input is the revenue requirement calculated in line ~~G27~~ **G29** minus the variable totex calculated in the table above.

		2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2020-25
27	Total revenue ~ wholesale	36.176	35.044	34.874	34.743	34.321	34.286	173.268
29	wastewater bioresources control	36.912	35.101	34.933	34.804	34.387	34.358	173.584
	less Variable Totex	-4.489	-2.508	-2.567	-2.531	-2.522	-2.716	-12.845
28	Wholesale wastewater	31.687	32.536	32.307	32.212	31.799	31.570	160.424
30	bioresources revenue to cover fixed costs	32.423	32.593	32.366	32.273	31.865	31.642	160.739

Annex 1 Lines 13 – 19 and 25 - 26

The total “miscellaneous” income in the Business plan is shown in the Summary table below:

Year ending Mar	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
2017-18 FYA (CPIH deflated)					
Summary					
Total Grants & Contributions (price control)	21.36	21.589	21.809	21.88	21.92
Total Grants & Contributions (non-price control)	<u>3.04</u>	<u>1.185</u>	<u>1.198</u>	<u>1.201</u>	<u>1.204</u>
Total Grants & Contributions	24.4	22.774	23.007	23.081	23.124
Total Other Income (price control)	6.477	6.477	6.477	6.477	6.477
Total Other Income (non-price control)	<u>18.049</u>	<u>18.069</u>	<u>18.088</u>	<u>18.108</u>	<u>18.128</u>
Total Other income	24.526	24.546	24.565	24.585	24.605
Price control income	27.837	28.066	28.286	28.357	28.397
Non-price control	<u>21.089</u>	<u>19.254</u>	<u>19.286</u>	<u>19.31</u>	<u>19.333</u>
Total "miscellaneous" income	48.927	47.319	47.573	47.667	47.729

Year ending Mar	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m
2017-18 FYA (CPIH deflated)					
Summary					
Total Grants & Contributions (price control)	21.360	21.589	21.809	21.880	21.920
Total Grants & Contributions (non-price control)	<u>3.040</u>	<u>1.185</u>	<u>1.198</u>	<u>1.201</u>	<u>1.204</u>
Total Grants & Contributions	24.400	22.774	23.007	23.082	23.124
Total Other Income (price control)	6.477	6.477	6.477	6.477	6.477
Total Other Income (non-price control)	<u>18.040</u>	<u>18.060</u>	<u>18.080</u>	<u>18.099</u>	<u>18.120</u>
Total Other income	24.517	24.537	24.557	24.576	24.596
Price control income	27.837	28.066	28.286	28.357	28.397
Non-price control	<u>21.080</u>	<u>19.245</u>	<u>19.278</u>	<u>19.301</u>	<u>19.324</u>
Total "miscellaneous" income	48.918	47.311	47.564	47.658	47.720

The individual lines for App 17 and the method of apportionment between the sub-controls (and reported in tables Wr3, Wn3, WWn5, Bio4) are shown in the tables below:

	Year ending Mar	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m	Apportionment to sub-controls
B	Wholesale - other price control income						
13	Third party revenue						
	<u>Consists of non-potable water (not bulk supplies):</u>						
	<i>Band A Raw <50 MI</i>						
	<i>Band A Partial < 50MI</i>						
	<i>Band B Raw >50 MI</i>						
	<i>Band B Partial >50 MI</i>						
	<i>Special agreements – (WSHNONPOT9, 10a and 10b)</i>						
Wr3	Third party revenue	-2.824	-2.824	-2.824	-2.824	-2.824	Split as per cost attribution model informing Scheme of Charges
Wn3	Third party revenue	-3.653	-3.653	-3.653	-3.653	-3.653	Split as per cost attribution model informing Scheme of Charges
WWn5	Third party revenue	-	-	-	-	-	
Bio4	Third party revenue	-	-	-	-	-	
App17	Third party revenue	-6.477	-6.477	-6.477	-6.477	-6.477	
C	Non-price control income (third party)						
14	Bulk supplies						
	<u>Consists of:</u>						
	<i>Bulk supplies water</i>						
	<i>Bulk supplies wastewater</i>						
Wr3	Bulk supplies	-8.174	-8.174	-8.174	-8.174	-8.174	Split as per cost attribution model informing Scheme of Charges
Wn3	Bulk supplies	-0.396	-0.396	-0.396	-0.396	-0.396	Split as per cost attribution model informing Scheme of Charges
WWn5	Bulk supplies	-0.015	-0.015	-0.015	-0.015	-0.015	Split 50:50 (not material)
Bio4	Bulk supplies	-0.015	-0.015	-0.015	-0.015	-0.015	Split 50:50 (not material)
App17	Bulk supplies	8.601	8.601	8.601	8.601	8.601	
16	Rechargeable works						
	<u>Consists of:</u>						
	<i>Fire hydrants</i>						
	<i>Repair of damage to Co apparatus</i>						
	<i>Build over sewers</i>						
	<i>Installing meter on unmeasured (Non-household)</i>						
	<i>Trade effluent consent revision</i>						
	<i>Non-primary charges from wholesale service centre</i>						
	<i>Provision of plan information of underground assets</i>						
	<i>Flow and pressure testing of customer supply</i>						
	<i>Meter testing</i>						

Welsh Water Wholesale Water Network Business Plan Commentaries

	Year ending Mar	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m	Apportionment to sub-controls
		2017-18 FYA (CPIH deflated)					
	<i>Relocating household meter</i>						
	<i>Private sewer cleaning</i>						
	<i>Disconnection / reconnection of supply</i>						
Wr3	Rechargeable works	-	-	-	-	-	
Wn3	Rechargeable works	-0.473	-0.473	-0.473	-0.473	-0.473	All allocated to network plus
WWn5	Rechargeable works	-0.464	-0.464	-0.464	-0.464	-0.464	All allocated to network plus
Bio4	Rechargeable works	-	-	-	-	-	
App17	Rechargeable works	-0.937	-0.937	-0.937	-0.937	-0.937	
17	Other non-price control (third party services)						
	<u>Consists of "Excluded" charges (Li.Con B)</u>						
	<i>s20 Reservoir operating agreements (NRW)</i>						
	<i>s20 Reservoir operating agreements (additional capex) (NRW)</i>						
	<i>Stand pipes</i>						
	<i>Water tanks & water tankers</i>						
	<i>Reception and disposal of waste (costs& income in non-appointed)</i>						
Wr3	Other non-price control (third party services)	-7.607	-7.627	-7.647	-7.667	-7.687	s20 allocated 100% to Water Resources
Wn3	Other non-price control (third party services)	-0.026	-0.026	-0.026	-0.026	-0.026	Tankers allocate 100% to network plus
WWn5	Other non-price control (third party services)	-	-	-	-	-	
Bio4	Other non-price control (third party services)	-	-	-	-	-	
App17	Other non-price control (third party services)	-7.633	-7.653	-7.672	-7.692	-7.712	
18	Total non-price control income (third party services)						
Wr3	Total non-price control income (third party services)	15.782	15.801	15.821	15.841	15.861	
Wn3	Total non-price control income (third party services)	0.894	0.894	0.894	0.894	0.894	
WWn5	Total non-price control income (third party services)	0.48	0.48	0.48	0.48	0.48	
Bio4	Total non-price control income (third party services)	0.015	0.015	0.015	0.015	0.015	
App17	Total non-price control income (third party services)	17.171	17.191	17.21	17.23	17.25	
D	Non-price control income (principal services)						
19	Other non-price control (principal services)						
	<u>Consists of:</u>						
	<i>Rental income (mobile phone masts, wind turbines, solar panels))</i>						
Wr3	Other non-price control (principal services)	0.494	0.494	0.494	0.494	0.494	Allocated in proportion to weighted average site income from 15/16 to 17/18
Wn3	Other non-price control (principal services)	0.07	0.07	0.07	0.07	0.07	Allocated in proportion to weighted average site income from 15/16 to 17/18
WWn5	Other non-price control (principal services)	0.152	0.152	0.152	0.152	0.152	Allocated in proportion to weighted average site income from 15/16 to 17/18
Bio4	Other non-price control (principal services)	0.161	0.161	0.161	0.161	0.161	Allocated in proportion to weighted average site income from 15/16 to 17/18
App17	Other non-price control (principal services)	0.878	0.878	0.878	0.878	0.878	

Welsh Water Wholesale Water Network Business Plan Commentaries

		Year ending Mar	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m	Apportionment to sub-controls
			2017-18 FYA (CPIH deflated)					
F	Grants & Contributions							
25	Wholesale grants and contributions (price control)							
	<u>Consists of capital income:</u>							
	Infrastructure charges							
	Requisitions and self-lay							
	Connection charges (s45—Water)							
	Diversions							
Wr3	Wholesale grants and contributions (price control)		-	-	-	-	-	
Wn3	Wholesale grants and contributions (price control)		12.789	12.939	13.084	13.127	13.155	All allocated to network plus
WWn5	Wholesale grants and contributions (price control)		8.571	8.650	8.725	8.753	8.765	All allocated to network plus
Bio4	Wholesale grants and contributions (price control)		-	-	-	-	-	
App17	Wholesale grants and contributions (price control)		21.360	21.589	21.809	21.880	21.920	
26	Wholesale grants and contributions (non-price control)							
	<u>Consists of capital income:</u>							
	Sewer vetting, adoption agreements (PR19)							
	Feasibilities							
	Grants							
Wr3	Wholesale grants and contributions (non-price control)		1.868	-	-	-	-	Non-grant income allocated to network plus, Grant income allocated by scheme
Wn3	Wholesale grants and contributions (non-price control)		0.053	0.053	0.053	0.053	0.053	As above
WWn5	Wholesale grants and contributions (non-price control)		1.119	1.132	1.145	1.148	1.151	As above
Bio4	Wholesale grants and contributions (non-price control)		-	-	-	-	-	As above
App17	Wholesale grants and contributions (non-price control)		3.040	1.185	1.198	1.201	1.204	

Welsh Water Wholesale Water Network Business Plan Commentaries

		Year ending Mar	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m	Apportionment to sub-controls
				2017-18 FYA (CPIH deflated)				
B	Wholesale - other price control income							
13	Third party revenue							
	<u>Consists of non-potable water (not bulk supplies):</u>							
	<i>Band A Raw <50 MI</i>							
	<i>Band A Partial < 50MI</i>							
	<i>Band B Raw >50 MI</i>							
	<i>Band B Partial >50 MI</i>							
	<i>Special agreements – (WSHNONPOT9, 10a and 10b)</i>							
Wr3	Third party revenue		2.824	2.824	2.824	2.824	2.824	Split as per cost attribution model informing Scheme of Charges
Wn3	Third party revenue		3.653	3.653	3.653	3.653	3.653	Split as per cost attribution model informing Scheme of Charges
WWn5	Third party revenue		-	-	-	-	-	
Bio4	Third party revenue		-	-	-	-	-	
App17	Third party revenue		6.477	6.477	6.477	6.477	6.477	
C	Non-price control income (third party)							
14	Bulk supplies							
	<u>Consists of:</u>							
	<i>Bulk supplies water</i>							
	<i>Bulk supplies wastewater</i>							
Wr3	Bulk supplies		8.174	8.174	8.174	8.174	8.174	Split as per cost attribution model informing Scheme of Charges
Wn3	Bulk supplies		0.396	0.396	0.396	0.396	0.396	Split as per cost attribution model informing Scheme of Charges
WWn5	Bulk supplies		0.015	0.015	0.015	0.015	0.015	Split 50:50 (not material)
Bio4	Bulk supplies		0.015	0.015	0.015	0.015	0.015	Split 50:50 (not material)
App17	Bulk supplies		8.600	8.600	8.600	8.600	8.600	
16	Rechargeable works							
	<u>Consists of:</u>							
	<i>Fire hydrants</i>							
	<i>Repair of damage to Co apparatus</i>							
	<i>Build over sewers</i>							
	<i>Installing meter on unmeasured (Non-household)</i>							
	<i>Trade effluent consent revision</i>							
	<i>Non-primary charges from wholesale service centre</i>							
	<i>Provision of plan information of underground assets</i>							
	<i>Flow and pressure testing of customer supply</i>							
	<i>Meter testing</i>							
	<i>Relocating household meter</i>							

Welsh Water Wholesale Water Network Business Plan Commentaries

	Year ending Mar	2021 £m	2022 £m	2023 £m	2024 £m	2025 £m	Apportionment to sub-controls
		2017-18 FYA (CPIH deflated)					
	<i>Private sewer cleaning</i>						
	<i>Disconnection / reconnection of supply</i>						
Wr3	Rechargeable works	-	-	-	-	-	
Wn3	Rechargeable works	0.473	0.473	0.473	0.473	0.473	All allocated to network plus
WWn5	Rechargeable works	0.464	0.464	0.464	0.464	0.464	All allocated to network plus
Bio4	Rechargeable works	-	-	-	-	-	
App17	Rechargeable works	0.937	0.937	0.937	0.937	0.937	
17	Other non-price control (third party services)						
	<i>Consists of "Excluded" charges (Li.Con B)</i>						
	<i>s20 Reservoir operating agreements (NRW)</i>						
	<i>s20 Reservoir operating agreements (additional capex) (NRW)</i>						
	<i>Stand pipes</i>						
	<i>Water tanks & water tankers</i>						
	<i>Reception and disposal of waste (costs& income in non-appointed)</i>						
Wr3	Other non-price control (third party services)	7.607	7.627	7.647	7.667	7.687	s20 allocated 100% to Water Resources
Wn3	Other non-price control (third party services)	0.026	0.026	0.026	0.026	0.026	Tankers allocate 100% to network plus
WWn5	Other non-price control (third party services)	-	-	-	-	-	
Bio4	Other non-price control (third party services)	-	-	-	-	-	
App17	Other non-price control (third party services)	7.633	7.653	7.673	7.693	7.713	
18	Total non-price control income (third party services)						
Wr3	Total non-price control income (third party services)	15.782	15.801	15.821	15.841	15.861	
Wn3	Total non-price control income (third party services)	0.894	0.894	0.894	0.894	0.894	
WWn5	Total non-price control income (third party services)	0.480	0.480	0.480	0.480	0.480	
Bio4	Total non-price control income (third party services)	0.015	0.015	0.015	0.015	0.015	
App17	Total non-price control income (third party services)	17.171	17.190	17.210	17.230	17.250	
D	Non-price control income (principal services)						
19	Other non-price control (principal services)						
	<i>Consists of:</i>						
	<i>Rental income (mobile phone masts, wind turbines, solar panels))</i>						
Wr3	Other non-price control (principal services)	0.494	0.494	0.494	0.494	0.494	Allocated in proportion to weighted average site income from 15/16 to 17/18
Wn3	Other non-price control (principal services)	0.070	0.070	0.070	0.070	0.070	Allocated in proportion to weighted average site income from 15/16 to 17/18
WWn5	Other non-price control (principal services)	0.152	0.152	0.152	0.152	0.152	Allocated in proportion to weighted average site income from 15/16 to 17/18
Bio4	Other non-price control (principal services)	0.152	0.152	0.152	0.152	0.152	Allocated in proportion to weighted average site income from 15/16 to 17/18
App17	Other non-price control (principal services)	0.868	0.868	0.868	0.868	0.868	

DCE August 2018 PR19 Data Table and Commentary Review

The table below shows the recalculated grants and contributions and the change from the September submission

	Year ending Mar	units	2021	2022	2023	2024	2025	2021	2022	2023	2024	2025	2021	2022	2023	2024	2025
								October submission					Difference				
Table Wr3																	
F	Grants & Contributions																
25	Opex G&C (price control)	£m	-	-	-	-	-						-	-	-	-	-
26	Capex G&C (price control)	£m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	Opex G&C (non-price control)	£m	-	-	-	-	-						-	-	-	-	-
28	Capex G&C (non-price control)	£m	(1.868)	-	-	-	-	(1.868)	-	-	-	-	-	-	-	-	-
Table Wn3																	
F	Grants & Contributions												Diversions & New Conns (opex) reallocated to G&C (Opex)				
25	Opex G&C (price control)	£m	(6.955)	(6.876)	(6.798)	(6.722)	(6.648)						6.955	6.876	6.798	6.722	6.648
26	Capex G&C (price control)	£m	(5.834)	(6.063)	(6.286)	(6.405)	(6.507)	(12.789)	(12.939)	(13.084)	(13.127)	(13.155)	(6.955)	(6.876)	(6.798)	(6.722)	(6.648)
27	Opex G&C (non-price control)	£m	-	-	-	-	-						-	-	-	-	-
28	Capex G&C (non-price control)	£m	(0.053)	(0.053)	(0.053)	(0.053)	(0.053)	(0.053)	(0.053)	(0.053)	(0.053)	(0.053)	-	-	-	-	-
Table WWn5																	
F	Grants & Contributions												Diversions & New Conns (opex) reallocated to G&C Opex (pc)				
25	Opex G&C (price control)	£m	(2.202)	(2.202)	(2.202)	(2.202)	(2.202)						Adoption Charges reallocated to G&C Opex (non-pc)				
26	Capex G&C (price control)	£m	(6.369)	(6.447)	(6.523)	(6.550)	(6.562)	(8.571)	(8.650)	(8.725)	(8.753)	(8.765)	2.202	2.202	2.202	2.202	2.202
27	Opex G&C (non-price control)	£m	(0.814)	(0.827)	(0.840)	(0.844)	(0.847)						(2.202)	(2.202)	(2.202)	(2.202)	(2.202)
28	Capex G&C (non-price control)	£m	(0.814)	(0.827)	(0.840)	(0.844)	(0.847)	0.814	0.827	0.840	0.844	0.847	0.814	0.827	0.840	0.844	0.847
28	Capex G&C (non-price control)	£m	(0.305)	(0.305)	(0.305)	(0.305)	(0.305)	(1.119)	(1.132)	(1.145)	(1.148)	(1.151)	(0.814)	(0.827)	(0.840)	(0.844)	(0.847)
Total																	
F	Grants & Contributions																
25	Opex G&C (price control)		(9.158)	(9.078)	(9.001)	(8.925)	(8.850)						9.158	9.078	9.001	8.925	8.850
26	Capex G&C (price control)		(12.203)	(12.510)	(12.808)	(12.955)	(13.069)	(21.360)	(21.589)	(21.809)	(21.880)	(21.920)	(9.158)	(9.078)	(9.001)	(8.925)	(8.850)
27	Opex G&C (non-price control)	£m	(0.814)	(0.827)	(0.840)	(0.844)	(0.847)						0.814	0.827	0.840	0.844	0.847
28	Capex G&C (non-price control)	£m	(2.226)	(0.358)	(0.358)	(0.358)	(0.358)	(3.040)	(1.185)	(1.198)	(1.201)	(1.204)	(0.814)	(0.827)	(0.840)	(0.844)	(0.847)
Total Grants & Contributions			(24.400)	(22.774)	(23.007)	(23.081)	(23.124)	(24.400)	(22.774)	(23.007)	(23.081)	(23.124)	-	-	-	-	-

DCE August 2018 PR19 Data Table and Commentary Review

Annex 2 - Analysis for lines 20 to 23 - Current period proportions from the analysis of wholesale revenues

Proportion of annual revenue by Wholesale control

	2015-16	2016-17	2017-18	2018-19	Average
	Measured	Measured	Measured	Measured	Measured
Water					
Household	19.61%	20.69%	21.84%	21.95%	21.02%
Non-Household	26.67%	26.80%	26.46%	27.08%	26.75%
	46%	47%	48%	49%	48%

	2015-16	2016-17	2017-18	2018-19	Average
	Measured	Measured	Measured	Measured	Measured
Wastewater					
Household	25.20%	25.28%	26.75%	26.85%	26.02%
Non-Household	18.47%	19.07%	19.32%	18.95%	18.95%
	44%	44%	46%	46%	45%

	2015-16	2016-17	2017-18	2018-19	Average
	Measured	Measured	Measured	Measured	Measured
Wholesale					
Household	22.85%	23.34%	24.69%	24.78%	23.92%
Non-Household	21.92%	22.33%	22.31%	22.40%	22.24%
	45%	46%	47%	47%	46%

	2015-16	2016-17	2017-18	2018-19	Average
	Unmeasured	Unmeasured	Unmeasured	Unmeasured	Unmeasured
Water					
Household	52.92%	51.73%	50.95%	50.22%	51.46%
Non-Household	0.80%	0.78%	0.74%	0.75%	0.77%
	54%	53%	52%	51%	52%

	2015-16	2016-17	2017-18	2018-19	Average
	Unmeasured	Unmeasured	Unmeasured	Unmeasured	Unmeasured
Wastewater					
Household	55.59%	54.90%	53.23%	53.49%	54.30%
Non-Household	0.74%	0.75%	0.70%	0.70%	0.72%
	56%	56%	54%	54%	55%

	2015-16	2016-17	2017-18	2018-19	Average
	Unmeasured	Unmeasured	Unmeasured	Unmeasured	Unmeasured
Wholesale					
Household	54.46%	53.57%	52.28%	52.11%	53.10%
Non-Household	0.77%	0.76%	0.72%	0.72%	0.74%
	55%	54%	53%	53%	54%

DCE August 2018 PR19 Data Table and Commentary Review

Annual Change on proportion

	2015-16	2016-17	2017-18	2018-19	Average
	Measured	Measured	Measured	Measured	Measured
Water					
Household		1.08%	1.16%	0.11%	0.78%
Non-Household		0.12%	-0.33%	0.61%	0.13%

	2015-16	2016-17	2017-18	2018-19	Average
	Measured	Measured	Measured	Measured	Measured
Wastewater					
Household		0.07%	1.47%	0.11%	0.55%
Non-Household		0.60%	0.25%	-0.37%	0.16%

	2015-16	2016-17	2017-18	2018-19	Average
	Measured	Measured	Measured	Measured	Measured
Wholesale					
Household		0.49%	1.35%	0.08%	0.64%
Non-Household		0.41%	-0.01%	0.08%	0.16%

	2015-16	2016-17	2017-18	2018-19	Average
	2015-16	2016-17	2017-18	2018-19	Unmeasured
Water					
Household		-1.18%	-0.78%	-0.73%	-0.90%
Non-Household		-0.02%	-0.04%	0.00%	-0.02%

	2015-16	2016-17	2017-18	2018-19	Average
	Unmeasured	Unmeasured	Unmeasured	Unmeasured	Unmeasured
Wastewater					
Household		-0.68%	-1.67%	0.26%	-0.70%
Non-Household		0.00%	-0.05%	0.01%	-0.01%

	2015-16	2016-17	2017-18	2018-19	Average
	Unmeasured	Unmeasured	Unmeasured	Unmeasured	Unmeasured
Wholesale					
Household		-0.90%	-1.29%	-0.17%	-0.79%
Non-Household		-0.01%	-0.05%	0.01%	-0.02%

Bio5 - Cost recovery for bioresources

Table Validation

There are no validation errors in this table.

Lines 1 – 15

We have treated the capital value created from post 2020 investment arising from non-PAYG totex the same as the 2020 RCV. We have treated the RPI linked RCV the same and the CPIH linked RCV. We have set the RCV run off rate to match the average expected useful lives of the underlying assets. We have applied the same “natural” RCV run off rate to each of the RPI linked 2020 RCV, CPI linked 2020 RCV and the post 2020 investment. The natural rate of RCV run off remains appropriate for 2025-30 period.

For each price control the average expected useful lives have been generated using an assessment of the engineering lives of each asset class and weighted using the gross MEAV.

Block A Lines 1 -5 RCV run off rate ~ RPI linked RCV

Line 1 “Natural” RCV run off rate

Proposed “natural” RCV run off rates (indexed by RPI) for wholesale bioresources. (The percentage of the RPI linked RCV that is depreciated annually). The “natural RCV rate” is a rate which reflects the economic reality of the expenditure which the company is incurring and the long term nature of its investments.

The average expected useful lives of bioresources assets have been generated using an assessment of the engineering lives of each asset class and weighted using the gross MEAV.

The resulting asset life for bioresources is 16.1 years, corresponding to a “natural” RCV run off rate of 6.22% (reciprocal of asset life) for each year across AMP7 and AMP8.

Line 2 Adjustments to RCV run off rate to address transition from RPI to CPI

Proposed adjustments to the RCV run off rates (indexed by RPI) for wholesale Bioresources that the company considers are required to address issues arising from the transition from RPI to CPIH as the primary inflation index.

We are not proposing an adjustment to the RCV run off rate to address the transition from RPI to CPIH.

Line 3 Other adjustments to RCV run off rate

Proposed other adjustments to the RCV run off rates (indexed by RPI) for wholesale bioresources, that the company wishes to make to enable it address issues such as the smoothing of bills.

We are not proposing an adjustment to the RCV run off rate to address other issues. We have smoothed bills within the 2020-25 period on an NPV neutral basis using the functionality in the Ofwat financial model.

Line 4 Total RCV run off rate to be applied

Proposed total RCV run off rates (indexed by RPI) for wholesale bioresources. Equals the sum of Bio5 lines 1 to 3.

Calculated.

Line 5 Method used to apply run-off rate (straight line or reducing balance)

The method used to apply the RCV run off rates (indexed by RPI) either in a straight line or a reducing balance. (Description of the accounting method used to depreciate the RPI linked RCV). We expect the same method to be used in 2025-30 as for 2020-25.

We have used a reducing balance approach to apply the RCV run off rates.

Block B Lines 6 -10 RCV run off rate ~ CPI-CPI(H) linked RCV

Line 6 "Natural" RCV run off rate

Proposed "natural" RCV run off rates (indexed by CPIH) for wholesale bioresources. (The percentage of the CPI(H) linked RCV that is depreciated annually). The "natural RCV rate" is a rate which reflects the economic reality of the expenditure which the company is incurring and the long term nature of its investments.

The average expected useful lives of bioresources assets have been generated using an assessment of the engineering lives of each asset class and weighted using the gross MEAV.

The resulting asset life for bioresources is 16.1 years, corresponding to a "natural" RCV run off rate of 6.22% (reciprocal of asset life) for each year across AMP7 and AMP8.

Line 7 Adjustments to RCV run off rate to address transition from RPI to CPI

Proposed adjustments to the RCV run off rates (indexed by CPIH) for wholesale bioresources that the company considers are required to address issues arising from the transition from RPI to CPIH as the primary inflation index.

We are not proposing an adjustment to the RCV run off rate to address the transition from RPI to CPIH.

Line 8 Other adjustments to RCV run off rate

Proposed other adjustments to the RCV run off rates (indexed by CPIH) for wholesale bioresources, that the company wishes to make to enable it address issues such as the smoothing of bills.

We are not proposing an adjustment to the RCV run off rate to address other issues. We have smoothed bills within the 2020-25 period on an NPV neutral basis using the functionality in the Ofwat financial model.

Line 9 Total RCV run off rate to be applied

Proposed total RCV run off rates (indexed by CPIH) for wholesale bioresources. Equals the sum of Bio5 lines 6 to 8.

Calculated.

Line 10 Method used to apply run off rate (straight line or reducing balance)

The method used to apply the RCV run off rates (indexed by CPIH) either in a straight line or a reducing balance. (Description of the accounting method used to depreciate the CPI(H) linked RCV). We expect the same method to be used in 2025-30 as for 2020-25.

We have used a reducing balance approach to apply the RCV run off rates.

Block C Line 11 -15 Post 2020 Investment Run off Rate

Line 11 "Natural" post 2020 investment run off rate

Proposed "natural" post 2020 investment run off rates (indexed by CPIH) for wholesale bioresources. The "natural RCV rate" is a rate which reflects the economic reality of the expenditure which the company is incurring and the long term nature of its investments. Totex expenditure which is not recovered in the period through PAYG is to be added to "Post 2020 Investment."

The average expected useful lives of bioresources assets have been generated using an assessment of the engineering lives of each asset class and weighted using the gross MEAV.

The resulting asset life for bioresources is 16.1 years, corresponding to a "natural" RCV run off rate of 6.22% (reciprocal of asset life) for each year across AMP7 and AMP8.

Line 12 Adjustments to post 2020 investment run off rate to address transition from RPI to CPI
Proposed adjustments to the post 2020 investment run off rates (indexed by CPIH) for wholesale bioresources that the company considers are required to address issues arising from the transition from RPI to CPIH as the primary inflation index.

We are not proposing an adjustment to the RCV run off rate to address the transition from RPI to CPIH.

Line 13 Other adjustments to post 2020 investment run off rate
Proposed other adjustments to the post 2020 investment run off rates (indexed by CPIH) for wholesale bioresources, that the company wishes to make to enable it address issues such as the smoothing of bills.

We are not proposing an adjustment to the RCV run off rate to address other issues. We have smoothed bills within the 2020-25 period on an NPV neutral basis using the functionality in the Ofwat financial model.

Line 14 Total post 2020 investment run off rate to be applied
Proposed total post 2020 investment run off rates (indexed by CPIH) for wholesale bioresources. Equals the sum of Bio5 lines 11 to 13.
 Calculated.

Line 15 Method used to apply run off rate (straight line or reducing balance)
The method used to apply the post 2020 investment run off rates (indexed by CPIH) either in a straight line or a reducing balance. We expect the same method to be used in 2025-30 as for 2020-25.

We have used a reducing balance approach to apply the RCV run off rates.

Block D Lines 16 -19 PAYG Rate – Bioresources

Line 16 “Natural” PAYG rate – Bioresources

Proposed “natural” PAYG rates for wholesale bioresources relevant to the wholesale bioresources revenue - totex projected in Bio4. These should be expressed as a percentage of totex forecast in each year. The “natural PAYG rate” is a rate which reflects the economic reality of the expenditure which the company is incurring and the long term nature of its investments.

We have calculated the “natural” PAYG rate as the rate which recovers operating expenditure (inclusive of infrastructure renewal expenditure) in the year that it is incurred and capex net of grants and contributions is added to the RCV and recovered from both current and future customers over time.

The natural PAYG rate is Opex divided by Totex net of grants and contributions calculated on a year by year basis, as follows:

	2020-21	2021-22	2022-23	2023-24	2024-25
Opex (£m) <i>WWS1 line 11</i>	15.0	15.1	15.1	14.9	15.1
Totex (net G&Cs) (£m) <i>WWS1 line 21</i>	25.6	25.2	25.5	24.7	24.0
PAYG rate (%)	58.73%	59.73%	59.40%	60.38%	63.04%
	2025-26	2026-27	2027-28	2028-29	2029-30

Welsh Water Bioresources Table Commentaries

Opex (£m)	15.9	16.2	16.4	16.4	16.4
Totex (net G&Cs) (£m)	9.3	9.5	9.6	9.6	9.6
PAYG rate (%)	63.04%	63.04%	63.04%	63.04%	63.04%

	2020-21	2021-22	2022-23	2023-24	2024-25
Opex (£m) WWS1 line 11	15.310	15.303	15.367	15.136	15.361
Totex (net G&Cs) (£m) WWS1 line 21	25.719	25.322	25.569	24.796	24.118
PAYG rate (%)	59.53%	60.43%	60.10%	61.04%	63.69%

Line 17 Adjustments to PAYG rate to address transition from RPI to CPI ~ Bioresources

Proposed adjustments to the PAYG rates for wholesale bioresources that the company considers are required to address issues arising from the transition from RPI to CPIH as the primary inflation index.

We are not proposing an adjustment to the PAYG rate to address the transition from RPI to CPIH.

Line 18 Other adjustments to PAYG rate ~ Bioresources

Proposed other adjustments to the PAYG rates for wholesale bioresources that the company wishes to make to enable it address issues such as the smoothing of bills.

~~We are not proposing an adjustment to the PAYG rate to address other issues. We have smoothed bills within the 2020-25 period on an NPV neutral basis using the functionality in the Ofwat financial model.~~

We have adjusted the natural PAYG rate to address financeability in the notional company.

Line 19 Total PAYG rate ~ Bioresources

Proposed total PAYG rates to be applied to wholesale bioresources totex. Equals the sum of Bio5 lines 16 to 18.

Calculated.