

## 4J - Atypical expenditure by business unit - Wholesale water

Northumbrian Water

Data validation

For the 12 months ended 31 March 2018

Line description	Units	DPs	Water resources		Network+				Total	Company commentary (if required)	Completion
			Abstraction licences	Raw water abstraction	Raw water transport	Raw water storage	Water treatment	Treated water distribution			
<b>A Operating expenditure (excl. atypicals)</b>											
4J.1 Power	Em	3	0.000	6.035	2.409	0.000	2.113	13.083	23.640		
4J.2 Income treated as negative expenditure	Em	3	0.000	-0.002	0.000	0.000	-0.201	0.000	-0.203		
4J.3 Abstraction charges/ discharge consents	Em	3	28.022	0.046	0.000	0.000	0.275	0.000	28.343		
4J.4 Bulk supply	Em	3	0.000	1.000	0.000	0.000	0.000	0.000	1.000		
<b>Other operating expenditure</b>											
4J.5 - Renewals expended in year (Infrastructure)	Em	3	0.000	2.986	0.000	0.000	0.000	1.762	4.748		
4J.6 - Renewals expended in year (Non-Infrastructure)	Em	3	0.000	0.326	0.008	0.000	0.742	0.259	1.335		
4J.7 - Other operating expenditure excluding renewals	Em	3	0.000	6.433	0.534	1.558	34.316	60.974	103.815		
4J.8 Local authority and Cumulo rates	Em	3	0.000	5.003	3.479	0.000	4.699	23.348	36.529		
4J.9 Total operating expenditure (excluding third party services)	Em	3	28.022	21.827	6.430	1.558	41.944	99.426	199.207		
4J.10 Third party services	Em	3	4.939	0.018	1.035	0.001	0.312	1.827	8.132		
4J.11 Total operating expenditure	Em	3	32.961	21.845	7.465	1.559	42.256	101.253	207.339		
<b>B Capital expenditure (excl. atypicals)</b>											
4J.12 Maintaining the long term capability of the assets - infra	Em	3	0.000	0.092	0.733	0.000	0.000	26.341	27.166		
4J.13 Maintaining the long term capability of the assets - non-infra	Em	3	0.000	5.045	0.109	0.000	38.145	35.965	79.264		
4J.14 Other capital expenditure - infra	Em	3	0.000	1.373	0.000	0.000	0.000	18.746	20.119		
4J.15 Other capital expenditure - non-infra	Em	3	0.000	1.557	0.000	0.000	11.275	5.004	17.836		
4J.16 Infrastructure network reinforcement	Em	3	0.000	0.000	0.000	0.000	0.000	0.445	0.445		
4J.17 Total gross capital expenditure excluding third party services	Em	3	0.000	8.067	0.842	0.000	49.420	86.501	144.830		
4J.18 Third party services	Em	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
4J.19 Total gross capital expenditure	Em	3	0.000	8.067	0.842	0.000	49.420	86.501	144.830		
4J.20 Grants and contributions	Em	3	0.000	0.000	0.000	0.000	0.003	14.038	14.041		
4J.21 Totex	Em	3	32.961	29.912	8.307	1.559	91.673	173.716	338.128		
<b>C Cash expenditure (excl. atypicals)</b>											
4J.22 Pension deficit recovery payments	Em	3	0.000	0.392	0.034	0.054	1.760	3.973	6.213		
4J.23 Other cash items	Em	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
4J.24 Totex including cash items	Em	3	32.961	30.304	8.341	1.613	93.433	177.689	344.341		
<b>D Atypical expenditure</b>											
4J.25 Item 1	Em	3							0.000		
4J.26 Item 2	Em	3							0.000		
4J.27 Item 3	Em	3							0.000		
4J.28 Item 4	Em	3							0.000		
4J.29 Item 5	Em	3							0.000		
4J.30 Item 6	Em	3							0.000		
4J.31 Item 7	Em	3							0.000		
4J.32 Item 8	Em	3							0.000		
4J.33 Item 9	Em	3							0.000		
4J.34 Item 10	Em	3							0.000		
4J.35 Total atypical expenditure	Em	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
<b>E Total expenditure</b>											
4J.36 Total expenditure	Em	3	32.961	30.304	8.341	1.613	93.433	177.689	344.341		

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## Key to cells:

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Please refer to RAG 4.07 - Guideline for the table definitions in the annual performance report for the reporting year 2017-18

## Additional guidance

This table is closely associated with pro forma 4D in the APR (as per RAG4).

## 4K - Atypical expenditure by business unit - Wholesale wastewater

Northumbrian Water Data validation

For the 12 months ended 31 March 2018

Line description	Units	DPs	Network+ Sewage Collection			Network+ Sewage Treatment		Sludge			Total	Company commentary (if required)	Completion
			Foul	Surface water drainage	Highway drainage	Sewage treatment and disposal	Sludge liquor treatment	Sludge transport	Sludge treatment	Sludge disposal			
<b>A Operating expenditure (excl. atypicals)</b>													
4K.1 Power	£m	3	5,623	0.000	0.000	11,641	1,073	0.008	-0.796	0.000	17,549		
4K.2 Income treated as negative expenditure	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	-7,909	0.000	-7,909		
4K.3 Discharge Consents	£m	3	1,097	0.000	0.000	1,429	0.000	0.000	0.000	0.000	2,526		
4K.4 Bulk discharge	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
<b>Other operating expenditure</b>													
4K.5 - Renewals expensed in year (Infrastructure)	£m	3	1,563	2,591	1,395	0.000	0.000	0.000	0.000	0.000	5,549		
4K.6 - Renewals expensed in year (Non-Infrastructure)	£m	3	0.136	0.226	0.122	0.792	0.000	0.000	0.026	0.000	1,302		
4K.7 - Other operating expenditure excluding renewals	£m	3	1,669	14,258	7,726	25,665	0.761	3,770	6,685	1,290	64,644		
4K.8 Local authority and Cumulo rates	£m	3	0.275	0.000	0.000	0.022	0.000	1,264	0.000	0.000	7,561		
4K.9 Total operating expenditure (excluding third party services)	£m	3	10,363	17,075	9,243	45,549	1,834	3,778	2,290	1,290	91,442		
4K.10 Third party services	£m	3	0.086	0.112	0.004	0.100	0.000	0.000	0.000	0.000	0.302		
4K.11 Total operating expenditure	£m	3	10,469	17,187	9,247	45,649	1,834	3,778	2,290	1,290	91,744		
<b>B Capital expenditure (excl. atypicals)</b>													
4K.12 Maintaining the long term capability of the assets - infra	£m	3	4,818	7,986	4,300	0.004	0.000	0.000	0.000	0.000	17,108		
4K.13 Maintaining the long term capability of the assets - non-infra	£m	3	2,101	3,482	1,875	29,026	0.000	0.952	4,293	0.000	41,729		
4K.14 Other capital expenditure - infra	£m	3	4,118	6,825	3,675	0.000	0.000	0.000	0.000	0.000	14,618		
4K.15 Other capital expenditure - non-infra	£m	3	0.694	1,134	0.611	9,879	0.000	0.000	0.000	0.000	12,308		
4K.16 Infrastructure network reinforcement	£m	3	0.179	0.297	0.160	0.000	0.000	0.000	0.000	0.000	0,636		
4K.17 Total gross capital expenditure excluding third party services	£m	3	11,900	19,724	10,621	38,909	0.000	0.952	4,293	0.000	86,399		
4K.18 Third party services	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
4K.19 Total gross capital expenditure	£m	3	11,900	19,724	10,621	38,909	0.000	0.952	4,293	0.000	86,399		
4K.20 Grants and contributions	£m	3	1,808	2,997	1,614	0.003	0.000	0.000	0.000	0.000	6,422		
4K.21 Totex	£m	3	20,561	33,914	18,254	84,555	1,834	4,730	6,583	1,290	171,721		
<b>C Cash expenditure (excl. atypicals)</b>													
4K.22 Pension deficit recovery payments	£m	3	0.988	0.154	0.001	1,242	0.000	0.037	0.291	0.000	2,713		
4K.23 Other cash items	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
4K.24 Totex including cash items	£m	3	21,549	34,068	18,255	85,797	1,834	4,767	6,874	1,290	174,434		
<b>D Atypical expenditure</b>													
4K.25 Item 1	£m	3									0.000		
4K.26 Item 2	£m	3									0.000		
4K.27 Item 3	£m	3									0.000		
4K.28 Item 4	£m	3									0.000		
4K.29 Item 5	£m	3									0.000		
4K.30 Item 6	£m	3									0.000		
4K.31 Item 7	£m	3									0.000		
4K.32 Item 8	£m	3									0.000		
4K.33 Item 9	£m	3									0.000		
4K.34 Item 10	£m	3									0.000		
4K.35 Total atypical expenditure	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
<b>E Total expenditure</b>													
4K.36 Total expenditure	£m	3	21,549	34,068	18,255	85,797	1,834	4,767	6,874	1,290	174,434		

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## Additional guidance to this table:

This table is closely associated with pro forma 4E in the APR (as per RAG4.07).

**4L - Enhancement expenditure by purpose - Wholesale water**

Northumbrian Water Data validation

For the 12 months ended 31 March 2018

Line description	Units	DPs	Expenditure in report year							Cumulative expenditure on schemes completed in the report year						Company commentary (if required)	Completion	
			Water resources		Network			Treated water distribution	Total	Water resources		Network			Treated water distribution			Total
			Abstraction / licences	Raw water abstraction	Raw water transport	Raw water storage	Water treatment			Abstraction / licences	Raw water abstraction	Raw water transport	Raw water storage	Water treatment				
<b>A Enhancement expenditure by purpose</b>																		
4L.1 NEP - Making ecological improvements at abstractions (Habitats Directive, SSSI, NERC, BAPAs)	£m	3	0.000	-0.004	0.000	0.000	0.000	0.000	-0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.2 NEP - Eels Regulations (measures at intakes)	£m	3	0.000	2.584	0.000	0.000	0.000	0.000	2.584	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.3 Addressing low pressure	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.4 Improving taste / colour / odour	£m	3	0.000	0.000	0.000	0.000	0.000	5.544	0.000	5.544	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.5 Meeting best standards	£m	3	0.000	0.000	0.000	0.000	0.000	0.414	2.668	3.082	0.000	0.000	0.000	0.000	3.306	3.744	7.048	
4L.6 Supply side enhancements to the supply/demand balance (dry year critical / peak conditions)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.7 Supply side enhancements to the supply/demand balance (dry year annual average conditions)	£m	3	0.000	0.289	0.000	0.000	0.000	0.000	0.289	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.8 Demand side enhancements to the supply/demand balance (dry year critical / peak conditions)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.9 Demand side enhancements to the supply/demand balance (dry year annual average conditions)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.10 New developments	£m	3	0.000	0.000	0.000	0.000	0.000	0.160	5.198	5.358	0.000	0.000	0.000	0.000	0.000	5.128	5.128	
4L.11 New connections element of new development (CPs, meters)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	7.067	7.067	0.000	0.000	0.000	0.000	0.000	7.067	7.067	
4L.12 Investment to address raw water deterioration (THM, nitrates, Crypts, pesticides, others)	£m	3	0.000	0.060	0.000	0.000	0.000	0.000	0.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.13 Resilience	£m	3	0.000	0.000	0.000	0.000	0.000	-0.003	-0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.14 SEMD	£m	3	0.000	0.001	0.000	0.000	0.000	5.317	0.381	5.698	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.15 NEP - Investigations	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.16 Improvements to river flows	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.17 Metering (excluding cost of providing metering to new service connections) - meters requested by optants	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	7.008	7.008	0.000	0.000	0.000	0.000	0.000	0.000	7.008	
4L.18 Metering (excluding cost of providing metering to new service connections) - meters introduced by companies	£m	3	0.000	0.000	0.000	0.000	0.000	1.437	1.437	0.000	0.000	0.000	0.000	0.000	0.000	1.437	1.437	
4L.19 Metering (excluding cost of providing meters to new service connections) - other	£m	3	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.004	
4L.20 Infrastructure network reinforcement	£m	3	0.000	0.000	0.000	0.000	0.000	0.445	0.445	0.000	0.000	0.000	0.000	0.000	0.000	0.210	0.210	
4L.21 Capital expenditure purpose - WATER additional line 2 (Other categories)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.22 Capital expenditure purpose - WATER additional line 3 (Other categories)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.23 Capital expenditure purpose - WATER additional line 4 (Other categories)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.24 Capital expenditure purpose - WATER additional line 5 (Other categories)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.25 Capital expenditure purpose - WATER additional line 6 (Other categories)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.26 Capital expenditure purpose - WATER additional line 7 (Other categories)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.27 Capital expenditure purpose - WATER additional line 8 (Other categories)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.28 Capital expenditure purpose - WATER additional line 9 (Other categories)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.29 Capital expenditure purpose - WATER additional line 10 (Other categories)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.30 Capital expenditure purpose - WATER additional line 11 (Other categories)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.31 Capital expenditure purpose - WATER additional line 12 (Other categories)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.32 Capital expenditure purpose - WATER additional line 13 (Other categories)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.33 Capital expenditure purpose - WATER additional line 14 (Other categories)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.34 Capital expenditure purpose - WATER additional line 15 (Other categories)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4L.35 Total enhancement capital expenditure	£m	3	0.000	2.930	0.000	0.000	0.000	11.275	24.195	38.400	0.000	0.000	0.000	0.000	0.000	3.304	24.597	27.901

Key to cells:  
  Inout cell  
  Calculation cell

Please refer to RAG 4.07 - Guidelines for the table definitions in the annual performance report for the reporting year 2017-18

**Additional Guidance**  
 Where a quality enhancement scheme (or the proportionally allocated component of a quality enhancement scheme) has more than one cost driver, companies should allocate the expenditure attributable to the primary driver to the relevant line 1 to 24. Any net additional cost for delivering any further drivers should be included in the relevant line.



**4N - Operating expenditure - Sewage treatment - Wholesale wastewater**

Northumbrian Water

Data validation

For the 12 months ended 31 March 2018

Line description	Unit	DPs	Network+	Sludge	Total	Company commentary (if required)	Completion
4N.1 Direct costs of STWs in size band 1	£000	3	1188.828		1188.828		
4N.2 Direct costs of STWs in size band 2	£000	3	519.242		519.242		
4N.3 Direct costs of STWs in size band 3	£000	3	1357.138		1357.138		
4N.4 Direct costs of STWs in size band 4	£000	3	3105.954		3105.954		
4N.5 Direct costs of STWs in size band 5	£000	3	1971.184		1971.184		
4N.6 General & support costs of STWs in size bands 1 to 5	£000	3	2232.370		2232.370		
4N.7 Direct costs of STWs in size band 6	£000	3	24318.000		24318.000		
4N.8 General & support costs of STWs in size band 6	£000	3	6667.000		6667.000		
4N.9 Service charges for STWs in size band 6	£000	3	356.000		356.000		
4N.10 Estimated terminal pumping costs size band 6 works	£000	3	758.000		758.000		
4N.11 Estimated sludge costs size band 6 works	£000	3	0.000		0.000		
4N.12 Total operating expenditure (excluding 3rd party services)	£000	3	41359.716		41359.716		

**Key to cells:**
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 Calculated value
**Please refer to RAG 4.07 - Guideline for the table definitions in the annual performance report for the reporting year 2017-18**

Further to the RAWG meeting on 8 February 2018, Ofwat confirms that table 4N is a sewage treatment table and the sludge column is not applicable for 2017-18.

For 2017-18 purposes, table 4N reflects what was published in RAG 3.10. However, companies do not need to populate the sludge column.

Ofwat will make the change to table 4N as part of the RAGs consultation for 2018-19.

## Additional guidance to this table:

**Treatment works size:**

For the purpose of these tables, STW size is defined by the load received by the works, expressed as mass (i.e. kilograms [kg]) of BOD<sub>5</sub> per day. In calculating the size of a works, companies should assume that resident connected population contribute 60g BOD<sub>5</sub>/head/day and add the trade effluent load (total COD) using a conversion factor of COD:BOD of 2:1.

No allowance should be made for non-resident population when classifying the size band of a works.

Companies must include non-resident population when reporting loads and costs.

Under this classification scheme, large works are defined as those with an average daily loading >1,500kg BOD<sub>5</sub>/day, and small works are those with an average loading <=1,500kg BOD<sub>5</sub>/day.

**Small works**

- size band 1 <= 15kg BOD<sub>5</sub>/day (population equivalent: 0 - 250)
- size band 2 >15 but <= 30kg BOD<sub>5</sub>/day (population equivalent: 250 - 500)
- size band 3 >30 but <= 120kg BOD<sub>5</sub>/day (population equivalent: 500 - 2,000)
- size band 4 >120 but <= 600kg BOD<sub>5</sub>/day (population equivalent: 2,000 - 10,000)
- size band 5 >600 but <= 1,500kg BOD<sub>5</sub>/day (population equivalent: 10,000 - 25,000)

**Large works**

- size band 6 > 1,500kg BOD<sub>5</sub>/day (population equivalent: >25,000)



**AP - Non-financial data for WR, WT and WD - Wholesale water** Northumbrian Water Data validation

For the 12 months ended 31 March 2018

Line	Line description	Units	DPs	Current year	Company commentary (if required)	Completion
<b>A Water resources</b>						
4P-1	Proportion of distribution input derived from impounding reservoirs	Proportion to 1	3	0.149		
4P-2	Proportion of distribution input derived from pumped storage reservoirs	Proportion to 1	3	0.278		
4P-3	Proportion of distribution input derived from river abstractions	Proportion to 1	3	0.007		
4P-4	Proportion of distribution input derived from groundwater works excluding managed aquifer recharge (MAR) water supply schemes	Proportion to 1	3	0.066		
4P-5	Proportion of distribution input derived from artificial recharge (AR) water supply schemes	Proportion to 1	3	0.000		
4P-6	Proportion of distribution input derived from aquifer storage and recovery (ASR) water supply schemes	Proportion to 1	3	0.000		
4P-7	Number of impounding reservoirs	nr	0	24		
4P-8	Number of pumped storage reservoirs	nr	0	4		
4P-9	Number of river abstractions	nr	0	11		
4P-10	Number of groundwater works excluding managed aquifer recharge (MAR) water supply schemes	nr	0	51		
4P-11	Number of artificial recharge (AR) water supply schemes	nr	0	0		
4P-12	Number of aquifer storage and recovery (ASR) water supply schemes	nr	0	0		
4P-13	Total number of sources	nr	0	30		
4P-14	Total number of water reservoirs	nr	0	31		
4P-15	Total capacity of water reservoirs	M	0	44885		
4P-16	Total number of intake and source pumping stations	nr	0	61		
4P-17	Total number of raw water transfer stations	nr	0	12	Abertoe Tote Drain is excluded as it would be considered to be a Sewage Pumping Station in the North.	
4P-18	Total capacity of intake and source pumping stations	MW	0	23149		
4P-19	Total capacity of raw water transfer pumping stations	MW	0	13657		
4P-20	Total length of raw water mains and conveyors	km	2	125.95		
4P-21	Average pumping head – intake	m.h.d	2	32.25		
4P-22	Average pumping head – raw water transport	m.h.d	2	6.49		
<b>B Water treatment</b>						
4P-23	Total water treated at all SW simple disinfection works	Mld	2	0.00		
4P-24	Total water treated at all SW1 works	Mld	2	0.00		
4P-25	Total water treated at all SW2 works	Mld	2	0.00		
4P-26	Total water treated at all SW3 works	Mld	2	27.36		
4P-27	Total water treated at all SW4 works	Mld	2	604.51		
4P-28	Total water treated at all SW5 works	Mld	2	419.59		
4P-29	Total water treated at all SW6 works	Mld	2	0.00		
4P-30	Total water treated at all GW simple disinfection works	Mld	2	0.00		
4P-31	Total water treated at all GW1 works	Mld	2	0.00		
4P-32	Total water treated at all GW2 works	Mld	2	19.74		
4P-33	Total water treated at all GW3 works	Mld	2	22.72		
4P-34	Total water treated at all GW4 works	Mld	2	31.23		
4P-35	Total water treated at all GW5 works	Mld	2	0.00		
4P-36	Total water treated at all GW6 works	Mld	2	0.00		
4P-37	Total water treated at more than one type of works	Mld	2	0.00		
4P-38	Total number of SW simple disinfection works	nr	0	0		
4P-39	Total number of SW1 works	nr	0	0		
4P-40	Total number of SW2 works	nr	0	0		
4P-41	Total number of SW3 works	nr	0	5		
4P-42	Total number of SW4 works	nr	0	9		
4P-43	Total number of SW5 works	nr	0	9		
4P-44	Total number of SW6 works	nr	0	0		
4P-45	Total number of GW simple disinfection works	nr	0	0		
4P-46	Total number of GW1 works	nr	0	0		
4P-47	Total number of GW2 works	nr	0	15		
4P-48	Total number of GW3 works	nr	0	5		
4P-49	Total number of GW4 works	nr	0	12		
4P-50	Total number of GW5 works	nr	0	0		
4P-51	Total number of GW6 works	nr	0	0		
4P-52	Number of treatment works requiring remedial action because of raw water deterioration	nr	0	1	Rickingham WTW for nickel	
4P-53	Zonal population receiving water treated with orthophosphate	000	2	4300 005		
4P-54	Average pumping head – treatment	m.h.d	2	3.53		
<b>C Water distribution</b>						
4P-55	Total length of potable mains as at 31 March	km	1	29912.1		
4P-56	Total length of mains relined	km	1	0.0	The practice of relining is no longer used	
4P-57	Total length of mains renewed	km	1	84.4		
4P-58	Total length of non-potable mains	km	1	109.2		
4P-59	Potable water mains (<300mm)	km	1	23561.4		
4P-60	Potable water mains 300mm - 450mm	km	1	1085.6		
4P-61	Potable water mains 450mm - 610mm	km	1	406.6		
4P-62	Potable water mains > 610mm	km	1	860.5		
4P-63	Total length of non-potable and partially treated main for supplying customers	km	1	183.1		
4P-64	Total length of non-potable and partially treated main for treatment	km	1	327.3		
4P-65	Capacity of booster pumping stations	MW	0	36648		
4P-66	Capacity of service reservoirs	M	0	2228		
4P-67	Capacity of water towers	M	0	28		
4P-68	Distribution input	Mld	2	1118.77		
4P-69	Water delivered (non-potable)	Mld	2	81.26		
4P-70	Water delivered (potable)	Mld	2	954.70		
4P-71	Water delivered (billed measured residential)	Mld	2	255.60		
4P-72	Water delivered (billed measured business)	Mld	2	215.63		
4P-73	Total leakage	Mld	2	203.21		
4P-74	Distribution losses	Mld	2	159.31		
4P-75	Water taken unbilld	Mld	2	33.87		
4P-76	Number of lead communication pipes	nr	0	503799		
4P-77	Number of galvanised non-communication pipes	nr	0	51687		
4P-78	Number of other communication pipes	nr	0	1494955		
4P-79	Number of booster pumping stations	nr	0	305		
4P-80	Total number of service reservoirs	nr	0	288		
4P-81	Number of water towers	nr	0	36		
4P-82	Total length of mains laid or structurally refurbished pre-1980	km	1	26.7		
4P-83	Total length of mains laid or structurally refurbished between 1981 and 1990	km	1	191.2		
4P-84	Total length of mains laid or structurally refurbished between 1991 and 1999	km	1	348.6		
4P-85	Total length of mains laid or structurally refurbished between 1991 and 1999	km	1	2559.1		
4P-86	Total length of mains laid or structurally refurbished between 1991 and 1999	km	1	3494.4		
4P-87	Total length of mains laid or structurally refurbished between 1981 and 1989	km	1	5409.7		
4P-88	Total length of mains laid or structurally refurbished between 1981 and 2000	km	1	8395.9		
4P-89	Total length of mains laid or structurally refurbished post 2001	km	1	5502.2		
4P-90	Average pumping head – distribution	m.h.d	2	55.26		
<b>D Band Disclosure (nr)</b>						
4P-91	WTWs in size band 1	nr	0	19		
4P-92	WTWs in size band 2	nr	0	11		
4P-93	WTWs in size band 3	nr	0	4		
4P-94	WTWs in size band 4	nr	0	2		
4P-95	WTWs in size band 5	nr	0	6		
4P-96	WTWs in size band 6	nr	0	3		
4P-97	WTWs in size band 7	nr	0	8		
4P-98	WTWs in size band 8	nr	0	0		
<b>E Band Disclosure (%)</b>						
4P-99	Proportion of Total DI band 1	%	1	0.7%		
4P-100	Proportion of Total DI band 2	%	1	2.9%		
4P-101	Proportion of Total DI band 3	%	1	2.0%		
4P-102	Proportion of Total DI band 4	%	1	1.3%		
4P-103	Proportion of Total DI band 5	%	1	12.0%		
4P-104	Proportion of Total DI band 6	%	1	10.1%		
4P-105	Proportion of Total DI band 7	%	1	79.3%		
4P-106	Proportion of Total DI band 8	%	1	0.0%		

Key to cells:



**Please refer to RAG 4.07 - Guidelines for the table definitions in the annual performance report for the reporting year 2017-18**

**Treatment type guidance**

This section covers the proportion of distribution input derived from works falling into each category of water treatment and the numbers of works in each category as detailed in the table. For both groundwater and surface water, a works is here defined as an individual location which receives raw or partially treated water for treatment (excluding secondary disinfection) and direct delivery to customers. For the avoidance of doubt:

- If the output of a site needs to be blended so as to be potable, then that site in itself is not defined as a works. However, where the total treatment process is split between a number of sites, the DI entered treated distribution should be split pro rata between bands based on the volumes treated at the individual sites.
- The pre-aeration of deep borehole water is included in category SD correction
- Companies should include in Lines 38-63 water treatment works that have not been decommissioned and state in their commentary any instances where this is the case.

The categories of treatment types are:	Examples
SD: Works providing simple disinfection only;	<ul style="list-style-type: none"> <li>• Marginal chlorination</li> <li>• Pre-aeration</li> </ul>
W1: Simple disinfection plus simple physical treatment only;	<ul style="list-style-type: none"> <li>• Rapid gravity filtration</li> <li>• Slow sand filtration</li> <li>• Pressure filtration</li> </ul>
W2: Single stage complex physical or chemical treatment;	<ul style="list-style-type: none"> <li>• Super chlorination</li> <li>• Coagulation</li> <li>• Flocculation</li> <li>• Biofiltration</li> <li>• pH correction</li> <li>• Softening</li> </ul>
W3: More than one stage of complex treatment; but excluding processes in W4, W5 or W6.	<ul style="list-style-type: none"> <li>• Membrane filtration (excluding desalination)</li> <li>• Ozonation</li> <li>• Adsorption</li> <li>• Activated carbon / pesticide removal</li> <li>• UV treatment</li> <li>• Arsenic removal</li> <li>• Nitrate removal</li> </ul>
W4: Single stage complex physical or chemical treatment with significantly higher operating costs than in W2/W3;	<ul style="list-style-type: none"> <li>• Membrane filtration (excluding desalination)</li> <li>• Ozonation</li> <li>• Adsorption</li> <li>• Activated carbon / pesticide removal</li> <li>• UV treatment</li> <li>• Arsenic removal</li> <li>• Nitrate removal</li> </ul>
W5: More than one stage of complex, high cost treatment;	<ul style="list-style-type: none"> <li>• Membrane filtration (excluding desalination)</li> <li>• Ozonation</li> <li>• Adsorption</li> <li>• Activated carbon / pesticide removal</li> <li>• UV treatment</li> <li>• Arsenic removal</li> <li>• Nitrate removal</li> </ul>
W6: Works with one or more very high cost processes;	<ul style="list-style-type: none"> <li>• Desalination</li> <li>• Re-use</li> </ul>

**Band Guidance**

Site Band	Distributed Input Mld
Band 1	< 2
Band 2	≥ 2 & < 4
Band 3	≥ 4 & < 8
Band 4	≥ 8 & < 16
Band 5	≥ 16 & < 32
Band 6	≥ 32 & < 64
Band 7	≥ 64 & < 128
Band 8	≥ 128

**4Q - Non-financial data - Properties, population and other - Wholesale water Northumbrian Water** Data validation

For the 12 months ended 31 March 2018

Line description	Units	DPs	Current year	Company commentary (if required)	Completion
<b>A Properties and population</b>					
4Q.1 Residential properties billed for measured water (external meter)	000	3	721.907		
4Q.2 Residential properties billed for measured water (not external meter)	000	3	113.281		
4Q.3 Business properties billed measured water	000	3	85.591		
4Q.4 Residential properties billed for unmeasured water	000	3	977.489		
4Q.5 Business properties billed unmeasured water	000	3	8.299		
4Q.6 Total business connected properties at year end	000s	3	108.703		
4Q.7 Total residential connected properties at year end	000s	3	1909.970		
4Q.8 Total connected properties at year end	000	3	2018.673		
4Q.9 Number of residential meters renewed	000	3	17.626		
4Q.10 Number of business meters renewed	000s	3	0.570		
4Q.11 Number of meters installed at request of optants	000	3	23358.000		
4Q.12 Number of selective meters installed	000	3	4019.000		
4Q.13 Total number of new business connections	000	3	0.726		
4Q.14 Total number of new residential connections	000	3	13.616		
4Q.15 Total population served	000	3	4502.008	Total population served for the 2017/18 and forecasted years has been commissioned from Edge Analytics. In line with the WRRPG (Environment Agency, 2017) requirement, NWG has used local authority Plan housing growth evidence from all local authorities and has selected the Plan-based scenario	
4Q.16 Number of business meters (billed properties)	000	3	87.518		
4Q.17 Number of residential meters (billed properties)	000	3	835.188		
4Q.18 Company area	km2	0	11806	Correct Northern Water area used. Previous submissions used the combined Water & Sewerage area	
<b>B Other</b>					
4Q.19 Number of lead communication pipes replaced for water quality	nr	0	1110		
4Q.20 Total supply side enhancements to the supply demand balance (dry year critical / peak conditions)	Ml/d	2	0.00		
4Q.21 Total supply side enhancements to the supply demand balance (dry year annual average conditions)	Ml/d	2	0.00		
4Q.22 Total demand side enhancements to the supply demand balance (dry year critical / peak conditions)	Ml/d	2	7.77	Dry year critical / peak conditions are not applicable to NWL therefore the dry year annual average figures have been substituted for Line 22.	
4Q.23 Total demand side enhancements to the supply demand balance (dry year annual average conditions)	Ml/d	2	7.77	This is the sum of water efficiency savings, selective consumption and optant consumption for the year.	
4Q.24 Energy consumption - network plus	kWh	0	169033	Units updated post OFWAT changes in June'18, from kWh to Mwh. Original figure = 169033487 kwh. / 1000 = 169033mwh	
4Q.25 Energy consumption - water resources	MWh	0	56340	Units updated post OFWAT changes in June'18, from kWh to Mwh. Original figure = 56340429 kwh. / 1000 = 56340 mwh	
4Q.26 Energy consumption - wholesale	MWh	0	225373		
4Q.27 Peak factor	%	2	1.11%		
4Q.28 Mean Zonal Compliance	%	2	99.94%		
4Q.29 Volume of Leakage above or below the sustainable economic Level	Ml	3	-10.910	Sum of NW and ESW values	

**Key to cells:**

Input cell

Calculation cell

**Please refer to RAG 4.07 - Guideline for the table definitions in the annual performance report for the reporting year 2017-18****Additional guidance**

Lines 22 and 23 should exclude any costs incurred by the retail business unit. All demand management savings delivered in the reporting year should be included (whether funded as Lines 4Q.24, 4Q.25 and 4Q.26 relate to the energy costs associated with operating costs only. For consistency with the APR (Line 2B.1) this line should include all energy costs (including electricity, gas and fuel for vehicles, plant and machinery). These lines are intended to capture energy consumed; energy exported should not be included. Energy consumption should be allocated between lines 4Q.25 and 4Q.26 in a way that is consistent with the accounting separation units, i.e. 'network +' includes raw water distribution, water treatment and treated water distribution (in line with Ofwat's Water 2020 decisions document (May 2016)).

Based on UKWIR report 06/WR/01/7 ("Peak water demand forecasting methodology"), which says that the calculation of peaking factors will depend on circumstances such as a company's asset base and the specific drivers of peak demand, we will allow companies to use an alternative formula that is appropriate to them and explain their formula in the commentary.

We will change the definition as follows: Peaking factor is the ratio of maximum to average consumption. Average consumption need to be representative and need not be confined to the average consumption in the year. The duration over which maximum daily consumption is measured will be at least one week and unlikely to be more than a month.



## 4R - Non-financial data - Wastewater network and sludge - Wholesale wastewater

Northumbrian Water

Data validation

For the 12 months ended 31 March 2018

Line	Item description	Unit	DPs	Current year	Company commentary (if required)	Completion
<b>A Wastewater network</b>						
4R.1	Connectable properties served by s101A schemes completed in the report year	nr	0	3		
4R.2	Number of s101A schemes completed in the report year	Nr	0	1		
4R.3	Total pumping station capacity	kW	0	14339		
4R.4	Number of network pumping stations	nr	0	945	There are 16 new stations from last year and two that have become non-operational.	
4R.5	Total number of sewer blockages	nr	0	11934		
4R.6	Total number of gravity sewer collapses	nr	0	72	Does not include number for line 4R.7	
4R.7	Total number of sewer rising main bursts / collapses	nr	0	25	Not included in line 4R.6	
4R.8	Number of combined sewer overflows	nr	0	1415		
4R.9	Number of emergency overflows	nr	0	255		
4R.10	Number of settled storm overflows	nr	0	121		
4R.11	Sewer age profile (constructed post 2001)	km	0	2088		
4R.12	Volume of trade effluent	Ml/yr	2	8111.87	Updated units from Ml/d to Ml/yr as per OFWAT updates in June'18. Figures updated from 22.22Ml/d to 8111.87Ml/yr (22.2243 x 365)	
4R.13	Volume of wastewater receiving treatment at sewage treatment works	Ml/yr	2	315275.55		
4R.14	Length of gravity sewers rehabilitated	km	0	65	Known length used when PLR is identified. Average length used when no PLR is known.	
4R.15	Length of rising mains replaced or structurally refurbished	km	0	4	All known lengths aside form one asset where average has been assigned.	
4R.16	Length of foul (only) public sewers	km	0	3067		
4R.17	Length of surface water (only) public sewers	km	0	4452		
4R.18	Length of combined public sewers	km	0	8371		
4R.19	Length of rising mains	km	0	430		
4R.20	Length of other wastewater network pipework	Km	0	196		
4R.21	Total length of "legacy" public sewers as at 31 March	Km	0	16516		
4R.22	Length of formerly private sewers and lateral drains (s105A sewers)	km	0	13510	Current mapped length = 978.6 km	
<b>B Sludge</b>						
4R.23	Total sewage sludge produced, treated by incumbents	ttds/ year	1	70.3		
4R.24	Total sewage sludge produced, treated by 3rd party sludge service provider	ttds/ year	1	0.0		
4R.25	Total sewage sludge produced	ttds/ year	1	70.3		
4R.26	Percentage of sludge produced and treated at a site of STW and STC co-location	%	2	64.91%		
4R.27	Total sewage sludge disposed by incumbents	ttds/ year	1	28.3		
4R.28	Total sewage sludge disposed by 3rd party sludge service provider	ttds/ year	1	0.0		
4R.29	Total sewage sludge disposed	ttds/ year	1	28.3		
4R.30	Total measure of intersiting 'work' done by pipeline	ttds*km/year	0	0		
4R.31	Total measure of intersiting 'work' done by tanker	ttds*km/year	0	767		
4R.32	Total measure of intersiting 'work' done by truck	ttds*km/year	0	721		
4R.33	Total measure of intersiting 'work' done (all forms of transportation)	ttds*km/year	0	1488		
4R.34	Total measure of intersiting 'work' done by tanker (by volume transported)	m3*km/year	0	20224905		
4R.35	Total measure of 'work' done in sludge disposal operations by pipeline	ttds*km/year	0	0		
4R.36	Total measure of 'work' done in sludge disposal operations by tanker	ttds*km/year	0	0		
4R.37	Total measure of 'work' done in sludge disposal operations by truck	ttds*km/year	0	977		
4R.38	Total measure of 'work' done in sludge disposal operations (all forms of transportation)	ttds*km/year	0	977		
4R.39	Total measure of 'work' done by tanker in sludge disposal operations (by volume transported)	m3*km/year	0	0	Units updated from ttds*km/year to m3*km/year as per OFWAT June update. No update to value, still 0	
4R.40	Chemical P sludge as percentage of sludge produced at STWs	%	2	16.70%		

## Key to cells:

Input cell

Calculated value

Please refer to RAG 4.07 - Guideline for the table definitions in the annual performance report for the reporting year 2017-18

## Additional guidance to this table:

For the purposes of reporting quantities of sludge produced (lines 23 to 25), this is measured ideally at the boundary between the Network plus and Bioresources business units as defined in RAG 4 or if not, at the point of treatment. There should be continuous measurement via instrumentation rather than by composite or spot sampling.

Where both the incumbent and a 3rd party service provider undertake different stages of sludge treatment eg dewatering followed by lime stabilisation, sludge quantities should not be doubled-counted and should be reported either in line 23 or line 24, not both. Where this situation occurs the company should report on the quantity involved and the line to which it has been allocated in the commentary.

For the purposes of reporting against lines 27 and 28, sludge disposal operations for sludge recycled to farmland are assumed to end upon arrival at the field. Accordingly, no account need be taken of changes in the quantity of sludge stored in field piles when completing these lines.

45- Non-financial data - sewage treatment - Wholesale wastewater

Northumbrian Water Data validation

For the 12 months ended 31 March 2018

Table with columns for Line description, Unit, DPs, Treatment categories (Primary, Secondary, Tertiary), Phosphorus, BOD5, and Ammonia. Includes data for STWV in size band 1, 2, 3, 4, 5 and above size band 5.

Table with columns for Line description, Unit, DPs, Treatment categories (Primary, Secondary, Tertiary), Phosphorus, BOD5, and Ammonia. Includes data for STWV in size band 1, 2, 3, 4, 5 and above size band 5.

Table with columns for Line description, Unit, DPs, Current year. Includes data for Population equivalent served by STWV, STWV with light/darkflow P contents, STWV with light/darkflow N contents, and STWV with light/darkflow UV contents.

Table with columns for Line description, Unit, DPs, Current year. Includes data for Population equivalent served by STWV, STWV with light/darkflow P contents, STWV with light/darkflow N contents, and STWV with light/darkflow UV contents.

Key to cells: Input cell, Calculated value. Please refer to RAG 4.07 - Guidance for the table definitions in the annual performance report for the reporting year 2017-18.

Table with columns for Primary treatment, Secondary treatment, Tertiary treatment, Load received by STWV in size band 1, 2, 3, 4, 5, and above size band 5. Includes detailed descriptions of treatment methods and load calculation conventions.

Additional guidance to this table: In accordance with RAG 4 (Appendix 1), landfilled waste is not part of the reported business and should therefore be excluded from consideration when completing lines 45.1 to 45.7 (and lines 45.3 and 45.5).

**4T - Non-financial data - sludge treatment - Wholesale wastewater**

Northumbrian Water

Data validation

For the 12 months ended 31 March 2018

Line	Item description	Unit	DPs	by Incumbent	by 3rd party sludge service providers	Company commentary (if required)	Completion
<b>A Sludge treatment process</b>							
4T.1	% Sludge - untreated	%	1	0.0%	0.0%		
4T.2	% Sludge treatment process - raw sludge liming	%	1	0.0%	0.0%		
4T.3	% Sludge treatment process - conventional AD	%	1	0.0%	0.0%		
4T.4	% Sludge treatment process- advanced AD	%	1	100.0%	0.0%		
4T.5	% Sludge treatment process - incineration of raw sludge	%	1	0.0%	0.0%		
4T.6	% Sludge treatment process - incineration of digested sludge	%	1	0.0%	0.0%		
4T.7	% Sludge treatment process - phyto-conditioning/composting	%	1	0.0%	0.0%		
4T.8	% Sludge treatment process - other (specify)	%	1	0.0%	0.0%		
4T.9	% Sludge treatment process - Total	%	1	100.0%	0.0%		
<b>B (Un-incinerated) sludge disposal route</b>							
4T.10	% Sludge disposal route - landfill, raw	%	1	0.0%	0.0%		
4T.11	% Sludge disposal route - landfill, partly treated	%	1	0.0%	0.0%		
4T.12	% Sludge disposal route - land restoration / reclamation	%	1	0.0%	0.0%		
4T.13	% Sludge disposal route - sludge recycled to farmland	%	1	100.0%	0.0%		
4T.14	% Sludge disposal route - other (specify)	%	1	0.0%	0.0%		
4T.15	% Sludge disposal route - Total	%	1	100.0%	0.0%		

**Key to cells:**

	Input cell
--	------------

	Calculated value
--	------------------

**Please refer to RAG 4.07 - Guideline for the table definitions in the annual performance report for the reporting year 2017-18**

**Additional guidance to this table:**

The quantity of sludge produced to which the percentages reported in lines 1 to 9 (inclusive) relate should be that reported in Table 4R, line 31.

**4U - Non-financial data - Properties, population and other**

Northumbrian Water

Data validation

For the 12 months ended 31 March 2018

Line	Item description	Unit	DPs	Current year	Company commentary (if required)	Completion
<b>A Properties and population</b>						
4U.1	Residential properties connected during the year	000	3	8.750		
4U.2	Business properties connected during the year	000	3	0.377		
4U.3	Residential properties billed unmeasured sewage	000	3	719.148		
4U.4	Residential properties billed measured sewage	000	3	418.044		
4U.5	Residential properties billed for sewage	000	3	1137.192		
4U.6	Business properties billed unmeasured sewage	000	3	10.531		
4U.7	Business properties billed measured sewage	000	3	43.885		
4U.8	Business properties billed for sewage	000	3	54.416		
4U.9	Void properties	000	3	72.403		
4U.10	Total number of properties	000s	3	1264.011		
4U.11	Resident population	000	3	2616.949		
4U.12	Non-resident population	000	3	12.870		
<b>B Other</b>						
4U.13	Energy consumption - network plus	MWh	3	175244.351		
4U.14	Energy consumption - sludge	MWh	3	88013.816		
4U.15	Energy consumption - wholesale	MWh	3	263258.167		
4U.16	Population resident in National Parks, SSSIs and Areas of Outstanding Natural Beauty (AONBs)	000s	3	57.953		
4U.17	Total sewerage catchment area	km2	0	1308		
4U.18	Designated bathing waters	nr	0	34	DEFRA listed designated Bathing Waters	
4U.19	Number of intermittent discharge sites with event duration monitoring	nr	0	100	EA agreed output for 2017/18	
4U.20	Number of monitors for flow monitoring at STWs	Nr	0	0	All current sites that require MCERTs flow measurement were installed in the previous AMP4	
4U.21	Number of odour related complaints	nr	0	1437		
4U.22	Volume of storage provided at CSOs, storm tanks, etc to meet spill frequency objectives	m3	0	5854	The figure relates to the storage provided on the Whitburn Spills Reduction project and is a combination of additional network capacity provided at two sites by the construction of storage tanks (4700m3) and other storage sites	
4U.23	Total volume of network storage	m3	0	2413142		

**Key to cells:**

	Input cell
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	Calculated value
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Please refer to RAG 4.07 - Guideline for the table definitions in the annual performance report for the reporting year 2017-18

**Additional guidance to this table:****Non-resident population (Line 12)**

Where companies have followed a different methodology, they should provide details of the approach in their commentary.

**4V - Operating cost analysis - water resources**

Northumbrian Water

Data validation

For the 12 months ended 31 March 2018

Line	Item description	Unit	DPs	Impounding Reservoir	Pumped Storage	River Abstractions	Groundwater, excluding MAR water supply schemes	Artificial Recharge (AR) water supply schemes	Aquifer Storage and Recovery (ASR) water supply schemes	Total	Company commentary (if required)	Completion
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**Water resources****A Opex analysis**

4V.1	Power	£m	3	0.027	1,908	3,171	0.929	0.000	0.000	6.035		
4V.2	Income Treated as negative expenditure	£m	3	-0.002	0.000	0.000	0.000	0.000	0.000	-0.002		
4V.3	Local authority and Cumulo rates	£m	3	1.751	1,301	0.300	1.651	0.000	0.000	5.003		
4V.4	Other direct operating expenditure	£m	3	1.497	5,887	20,439	1,245	0.000	0.000	29,068		
4V.5	Other indirect operating expenditure	£m	3	1.456	2,707	4,944	0.638	0.000	0.000	9,745		
4V.6	Total operating expenditure (excluding 3rd party)	£m	3	4.729	11,803	28,854	4.463	0.000	0.000	49,849		
4V.7	Depreciation	£m	3	0.471	1,604	0.168	0.484	0.000	0.000	2,727		
4V.8	Total operating costs (excluding 3rd party)	£m	3	5,200	13,407	29,022	4,947	0.000	0.000	52,576	This line does not equal table 4J line 9, as this includes depreciation, 4J9 does not	

Line 4V.8 does not equal line 4D.9 for water resources, please provide reasoning and reconciliation in your commentary

Line	Item description	Unit	DPs	Water resources	Raw water distribution	Water treatment	Treated water distribution	Total
<b>B Other expenditure - wholesale water</b>								
4V.9	Employment costs - directly allocated	£m	3	3,444	0.445	12,686	31,506	48,081
4V.10	Employment costs - indirectly allocated	£m	3	1,721	1,281	7,287	16,887	27,176
4V.11	Number FTEs consistent with 4V.9 above	Nr	0	65	9	255	690	1019
4V.12	Number FTEs consistent with 4V.10 above	Nr	0	28	21	118	273	440
4V.13	Costs associated with Traffic Management Act	£m	3	0.000	0.000	0.000	0.287	0.287
<b>C Service charges</b>								
4V.14	Canal & River Trust service charges and discharge consents	£m	3	0.000	0.000	0.000	0.000	0.000
4V.15	Environment Agency service charges/ discharge consents	£m	3	28,068	0.000	0.275	0.000	28,343
4V.16	Other service charges / permits	£m	3	0.000	0.000	0.000	0.000	0.000
4V.17	Statutory water softening	£m	3	0.000	0.000	0.000	0.000	0.000

**Key to cells:**

Input cell

Calculated value

Please refer to RAG 4.07 - Guideline for the table definitions in the annual performance report for the reporting year 2017-18

**4W - Operating cost analysis - sludge treatment**

Northumbrian Water

Data validation

For the 12 months ended 31 March 2018

Line	Item description	Unit	DPs	Untreated sludge	Raw sludge liming	Conventional AD	Advanced AD	Incineration of raw sludge	Incineration of digested Sludge	Photo-conditioning / composting	Other	Total	Company commentary (if required)	Completion
<b>Sludge treatment opex by treatment type</b>														
<b>A Sludge treatment type</b>														
4W.1	Power	£m	3	0.000	0.000	0.000	-0.796	0.000	0.000	0.000	0.000	-0.796		
4W.2	Income treated as negative expenditure	£m	3	0.000	0.000	0.000	-7.909	0.000	0.000	0.000	0.000	-7.909		
4W.3	Local authority and Cumulo rates	£m	3	0.000	0.000	0.000	1.284	0.000	0.000	0.000	0.000	1.284		
4W.4	Other direct operating expenditure	£m	3	0.000	0.000	0.000	8.238	0.000	0.000	0.000	0.000	8.238		
4W.5	Other indirect operating expenditure	£m	3	0.000	0.000	0.000	1.473	0.000	0.000	0.000	0.000	1.473		
4W.6	Total operating expenditure (excluding 3rd party)	£m	3	0.000	0.000	0.000	2.290	0.000	0.000	0.000	0.000	2.290		
4W.7	Depreciation	£m	3	0.000	0.000	0.000	7.108	0.000	0.000	0.000	0.000	7.108		
4W.8	Total operating costs (excluding 3rd party)	£m	3	0.000	0.000	0.000	9.398	0.000	0.000	0.000	0.000	9.398	This line does not equal 4E line 9, as this line includes depreciation. 4E3 does not.	Line 4W.8 does not equal line 4E.9 for sludge treatment, please provide reasoning and reconciliation in your commentary.

<b>B Sludge disposal route</b>														
4W.9	Power	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
4W.10	Income treated as negative expenditure	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
4W.11	Local authority and Cumulo rates	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
4W.12	Other direct operating expenditure	£m	3	0.000	0.000	0.000	0.955	0.000	0.000	0.000	0.000	0.955		
4W.13	Other indirect operating expenditure	£m	3	0.000	0.000	0.000	0.335	0.000	0.000	0.000	0.000	0.335		
4W.14	Total operating expenditure (excluding 3rd party)	£m	3	0.000	0.000	0.000	1.290	0.000	0.000	0.000	0.000	1.290		
4W.15	Depreciation	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
4W.16	Total operating costs (excluding 3rd party)	£m	3	0.000	0.000	0.000	1.290	0.000	0.000	0.000	0.000	1.290		

**Other expenditure - Wholesale wastewater**

Line	Item description	Unit	DPs	Network plus sewage collection	Network plus sewage treatment	Sludge	Total
<b>C Opex analysis</b>							
4W.17	Employment costs - directly allocated	£m	3	10.363	10.707	6.741	27.811
4W.18	Employment costs - indirectly allocated	£m	3	6.568	7.313	1.999	15.880
4W.19	Number FTEs consistent with line 4W.17	Nr	0	224	287	96	607
4W.20	Number FTEs consistent with line 4W.18 above	Nr	0	106	118	32	256
4W.21	Costs associated with Traffic Management Act	£m	3	0.000	0.000	0.000	0.000
4W.22	Costs associated with Industrial Emissions Directive	£m	3	0.000	0.000	0.000	0.000
<b>D Service charges</b>							
4W.23	Canal & River Trust service charges and discharge consents	£m	3	0.000	0.000	0.000	0.000
4W.24	Environment Agency service charges / discharge consents	£m	3	1.097	1.429	0.000	2.526
4W.25	Other service charges / permits	£m	3	0.000	0.000	0.000	0.000

**Key to cells:**

Input cell

Calculated value

**Please refer to RAG 4.07 - Guideline for the table definitions in the annual performance report for the reporting year 2017-18**