South Staffs Water

Commentary for Cost Assessment Tables

15 July 2020

making water count

Introduction

This commentary accompanies the cost assessment data return of SSC submitted on 15th July 2020 covering the financial year 2019/20.

For any queries on this data return, please contact the following via email:

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The combined entity of South Staffs Cambridge (SSC)

This data submission of SSC is a combined submission for its two operating regions, the former independent water only companies of South Staffs Water and Cambridge Water.

We have taken the approach of collecting the cost assessment performance data for each region individually. This ensures that we understand the full audit trail for each data line from each region, as some operational systems and processes remain separate since the merger. The approach also ensures we understand the differences between our two regions that can inform our operational strategy and business planning processes. Once collected at regional level, the majority of the data lines can simply be added together for the two operating regions to arrive at the SSC level value. For example lengths of mains, number of properties, number of treatment works, leakage and distribution input. For those lines which require a proportional input value then we have aggregated the data by using distribution input to determine the proportional value at the SSC level.

Assurance

We recognise the importance of the data supplied in this submission for future cost modelling and therefore we have applied our assurance framework risk assessment process to ensure that we carry sufficient governance.

A summary of the output of our assurance framework for this submission is as follows:

Risk Score			
Likelihood Score	**Impact Score**	**Total Risk Score**	**Assurance Risk Category**
2	3	6	Medium

The likelihood score is medium as much of the data uses longstanding definitions that we are familiar with and that our systems and processes are already set up to produce. Often, the data being reported is used internally for asset management purposes as well. Since the business plan submission where we found we had under-reported the number of booster pumping stations as a result of missing a definition change, we have paid extra attention to definitions for all operational data lines.

The impact score is high, as this data is an important part of creating industry wide cost assessment models.

Overall the risk score is medium. We have used our external technical auditor, Jacobs, to audit our reporting against the definitions and tracing data back to the source systems and calculations, at a regional level where appropriate. Jacob's assurance statement can be found in our published APR.

As last year we have elected to submit a commentary along with our data submission to explain (briefly where possible) how we have completed each data line. We have included more detail for data lines where we have any concerns about definitions, consistency across the industry, or where we have had to make assumptions.

Table commentaries

Table 4J: Atypical expenditure by business unit – wholesale water

This table mirrors table 4D apart from providing a means to report atypical items.

We have made an adjustment to line 4J.3 to report abstraction charges gross, and shown the EUIC rebate as an atypical item. As reported last year we are releasing the EUIC rebate into our annual accounts at the rate of one fifth the total rebate per year in AMP6 which is £236k per annum.

Table 4L: Enhancement expenditure by purpose – wholesale water

The total enhancement expenditure reconciles to table 4D/4J lines 14, 15 and 16.

Table 4P: Non-financial data for WR, WT and WD – wholesale water

Lines 1 to 8: We have recorded the distribution input from each of our source works for each year in the return, aggregated for each type of works, and used the total SSC distribution input as the normalising variable. Where a site has not produced any water in the year then it is not contributing to the figures. Note that line 4P.8 is indicating a validation error however the specified cells do total to 1.

Note that we have a large water treatment works located on the River Severn at Hampton Loade. Two points regarding this works:

1. It is shared with Severn Trent who pay a contribution towards the annual operating costs and capital costs of the works. Severn Trent's take from the works is downstream of the works within our distribution system, but we have taken the SSC output of the works to be 'net' of Severn Trent's take for the purposes of these lines as our own distribution input value is also net of our bulk exports to Severn Trent from this works.

2. At PR14 and earlier, there was no differentiation between pumped storage and river abstractions. Our Hampton Loade works consists of a river abstraction feeding a pumped storage reservoir, however the works is also capable of direct river abstraction in the event that the pumped storage reservoir is out of service. We have not used this feature of the works in 2019/20 and so we have allocated the works output entirely to line 2 (pumped storage) and counted it only as a pumped storage works rather than a river abstraction in lines 9 to 11.

Lines 9 to 16: We do not have any AR, ASR or saline water supply schemes. Line 16 is the sum of lines 9 through 15.

Line 17: We have none of this type of works.

Lines 18 and 19: We have one pumped storage reservoir located at Hampton Loade and one impounding reservoir located at Blithfield, making a total of two. The combined capacity of these reservoirs is given in line 19.

Line 20:	This line is equal to line 16. The definition in RAG 4.08 appears to confuse this line with line 21. Our reported value in line 20 does not include raw water transport, which is reported in line 21.
Line 21:	This line reports sites which have a raw water transport function to another location on a different site, for example for further treatment. The number reported in line 21 is distinct from the number reported in line 20.
Lines 22, 23, 69:	We have undertaken a thorough review of pump capacity data for this years' reporting, informed by data from pump replacements and capital projects.
Lines 24 and 27:	These categorisations are mapped to our GIS system where mains data is held.
Lines 25, 26, 60, 94:	We have calculated the average pumping head in accordance with the latest definition and our reported numbers are consistent with our historical numbers.
Line 28:	This line has been completed consistent with our WRMP.
Lines 29 to 57:	We have reviewed the categorisation of our treatment works to the latest definitions and allocated treated water volume accordingly. There are a number of movements across categories due to recent treatment enhancement schemes primarily due to changes in disinfection treatment processes (UV and chlorine dosing).
Line 58:	There are no schemes relevant to this line in 2019/20.
Line 59:	All of the water in both regions is treated with orthophosphate with the exception of Odsey supply zone in Cambridge, a small zone of 98 population. This zone has been deducted from the total combined population for this line.
Lines 61 to 68:	Our GIS contains mains data for both regions.
Lines 70, 71, 84, 85:	We have undertaken a review of the assets counted in this line and adjusted for one water tower (Rivey) that was decommissioned this year and two that are now used as service reservoirs rather than contact tanks, due to changes in treatment processes. The tanks that have changed function are small in comparison to a typical service reservoir and so have a minimal impact on total storage capacity.
Lines 72 to 79:	These lines are reported consistent with the definitions provided and the historical method of calculation as used in the June Return prior to 2012 and EA returns. They are therefore consistent with our AMP6 leakage and PCC reporting. Next year we will switch to reporting consistent with the revised AMP7 leakage and PCC reporting.
Lines 80 to 82:	As we do not have direct records of the material of customer communication pipes, we have made an estimate based on the age of the main to which it is connected, and used assumptions of the materials installed in particular time periods. We have used the 2011/12 year as a baseline and fixed the number of lead and galvanised communication pipes at that point. In subsequent years we have then reduced the number of lead and galvanised CPs by identifying the number of replacements that have been undertaken either due to water quality compliance failures, at customer request, or through network renewal schemes. This is data we have available in our works

management system. We have then increased line 82, the 'other' material category, by the amount that we have replaced and also by the number of new connections we have made, which would all be of modern materials.

Line 83: This line is now identical to the revised number of booster pumping stations reported as part of business plan query SSC-DD-CA-002 in May 2019. It would not have been appropriate to revert to our previous definition to be consistent with historical APRs when the correct interpretation of the definition (following Ofwat clarifications) was considered.

Lines 86 to 93: Our GIS contains the date of installation for all mains and fittings, enabling us to directly obtain this age profile.

Lines 95 to 110: The data tables instruct us to band using distribution input, whereas RAG 4.08 instructs us to band using maximum production capacity. We have therefore banded our treatment works by their rated maximum production capacity as instructed by RAG 4.08. We have used the PWPC value here for alignment with unplanned outage and to ensure we are using a robust, audited, maximum capacity value.

Table 4Q: Non-financial data – properties, population and other – wholesale water

Lines 1 to 17: We have adopted the latest definitions of residential and business properties which align with the separation of the business retail market.

Please note that we were unsure whether to include a value for lines 4Q.3 and 4Q.5 as we have exited the business retail market and so no longer bill business customers. However clearly as a wholesaler we still supply business customers and use the billing data from the market within other calculations, for example consumption and leakage reporting. We have kept in the value of billed customers that we would have reported had we not been an exited company, which can be removed at Ofwat's discretion if it is not required.

Line 18: This value is unchanged from the previous year.

Line 19: We replace lead CPs either as a result of water quality compliance failures for lead or as a result of a customer request where the customer is also replacing their supply pipe – both of these are covered by the definition of this data line. We have records within our works management system of these replacements, predominantly driven by customer requests.

Lines 20 to 23: In 2019/20 we had no supply side enhancement. Our demand side enhancement consists of water efficiency activity.

Lines 24 to 26: We have allocated energy consumption on the same basis as power costs are allocated across business units in table 4D.

Line 27: Since 2015/16 we have reported the combined business MZC as it is one of our ODIs, which is replicated in this line.

Lines 28 and 29: CRI and ERI are to be confirmed when the DWI publish their annual Chief Inspectors Report. These values at present are therefore draft based on our own calculations and liaison with DWI.

Line 30: We have added together the variances to SELL for each region to populate this data line. Note however that the two regions are independent and so have their own leakage commitments.

Table 4V: Operating cost analysis – water resources

Lines 1 to 11: The total operating expenditure excluding depreciation 4V.11 reconciles with table 4D line 4D.9.

Lines 12 to 17: The lines have been compiled using the same data sources that feed into our APR. Direct / Indirect splits manually reviewed in 19/20 to ensure accuracy with RAGS. Lines 4V.14 – 4V.17 are reported net of capitalisations.

Line 18: This includes the costs of the permits. Cost of fines and inspections not included.

Line 19: We have no Canal & River Trust Services charges or discharge consents.

Line 20: Abstraction attributed to WRE, EA discharge consents attributed to WTM.

Line 21: Remaining discharge consents attributed to WTM.

Line 22: We have no statutory water softening.

4J - Atypical expenditure by business unit - Wholesale water

South Staffordshire / Cambridge Water

Data validation

For the 12 months ended 31 March 2020

Line description		Units	DPs	Water resources		Network+				Total	Company commentary (if required)
				Abstraction licences	Raw water abstraction	Raw water transport	Raw water storage	Water treatment	Treated water distribution		
A	Operating expenditure (excl. atypicals)										
4J.1	Power	£m	3	0.000	2.279	0.920	0.000	1.135	9.724	14.058	
4J.2	Income treated as negative expenditure	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4J.3	Abstraction charges/ discharge consents	£m	3	3.077	0.000	0.000	0.000	0.211	0.000	3.288	
4J.4	Bulk supply	£m	3	0.000	0.003	0.000	0.000	0.011	0.000	0.014	
	Other operating expenditure										
4J.5	- Renewals expensed in year (Infrastructure)	£m	3	0.000	0.000	0.000	0.000	0.000	11.439	11.439	
4J.6	- Renewals expensed in year (Non-Infrastructure)	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4J.7	- Other operating expenditure excluding renewals	£m	3	0.000	1.560	0.310	0.002	6.646	19.631	28.149	
4J.8	Local authority and Cumulo rates	£m	3	0.000	0.154	0.190	0.000	0.372	4.362	5.078	
4J.9	Total operating expenditure (excluding third party services)	£m	3	3.077	3.996	1.420	0.002	8.375	45.156	62.026	
4J.10	Third party services	£m	3	0.000	0.009	0.002	0.000	0.669	1.367	2.047	
4J.11	Total operating expenditure	£m	3	3.077	4.005	1.422	0.002	9.044	46.523	64.073	
B	Capital expenditure (excl. atypicals)										
4J.12	Maintaining the long term capability of the assets - infra	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4J.13	Maintaining the long term capability of the assets - non-infra	£m	3	0.000	1.476	0.000	0.000	1.911	19.278	22.665	
4J.14	Other capital expenditure - infra	£m	3	0.000	0.436	0.000	0.000	0.000	12.616	13.052	
4J.15	Other capital expenditure - non-infra	£m	3	0.000	0.913	0.000	0.000	3.350	3.685	7.948	
4J.16	Infrastructure network reinforcement	£m	3	0.000	0.000	0.000	0.000	0.000	0.790	0.790	
4J.17	Total gross capital expenditure excluding third party services	£m	3	0.000	2.825	0.000	0.000	5.261	36.369	44.455	
4J.18	Third party services	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4J.19	Total gross capital expenditure	£m	3	0.000	2.825	0.000	0.000	5.261	36.369	44.455	
4J.20	Grants and contributions	£m	3	0.000	0.000	0.000	0.000	3.015	8.633	11.648	
4J.21	Totex	£m	3	3.077	6.830	1.422	0.002	11.290	74.259	96.880	
C	Cash expenditure (excl. atypicals)										
4J.22	Pension deficit recovery payments	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4J.23	Other cash items	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
4J.24	Totex including cash items	£m	3	3.077	6.830	1.422	0.002	11.290	74.259	96.880	
D	Atypical expenditure										
4J.25	Abstraction charges/ discharge consents	£m	3	-0.236	0.000	0.000	0.000	0.000	0.000	-0.236	- EUIC Rebate
4J.26	Item 2	£m	3							0.000	
4J.27	Item 3	£m	3							0.000	
4J.28	Item 4	£m	3							0.000	
4J.29	Item 5	£m	3							0.000	
4J.30	Item 6	£m	3							0.000	
4J.31	Item 7	£m	3							0.000	
4J.32	Item 8	£m	3							0.000	
4J.33	Item 9	£m	3							0.000	
4J.34	Item 10	£m	3							0.000	
4J.35	Total atypical expenditure	£m	3	-0.236	0.000	0.000	0.000	0.000	0.000	-0.236	
E	Total expenditure										
4J.36	Total expenditure	£m	3	2.841	6.830	1.422	0.002	11.290	74.259	96.644	

Key to cells:

Input cell

Calculation cell

4L - Enhancement expenditure by purpose - Wholesale water

South Staffordshire / Cambridge Water **Data validation**

For the 12 months ended 31 March 2020

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+				Total	Water resources		Network+				Total		
				Abstraction licences	Raw water abstraction	Raw water transport	Raw water storage	Water treatment	Treated water distribution		Abstraction licences	Raw water abstraction	Raw water transport	Raw water storage	Water treatment	Treated water distribution			
A	Enhancement expenditure by purpose																		
4L.1	NEP - Making ecological improvements at abstractions (Habitats Directive, SSSI, NERC, BAPs)	£m	3	0.000	0.469	0.000	0.000	0.000	0.000	0.469	0.000	0.469	0.000	0.000	0.000	0.000	0.469		
4L.2	NEP - Eels Regulations (measures at intakes)	£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		
4L.3	NEP - Invasive Non Native Species	£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		
4L.4	Addressing low pressure	£m	3	0.000	0.000	0.000	0.000	0.000	0.063	0.063	0.000	0.000	0.000	0.000	0.000	0.063	0.063		
4L.5	Improving taste / odour / colour	£m	3	0.000	0.000	0.000	0.000	0.786	0.000	0.786	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
4L.6	Meeting lead standards	£m	3	0.000	0.000	0.000	0.000	0.002	0.200	0.202	0.000	0.000	0.000	0.000	0.002	0.200	0.202		
4L.7	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		
4L.8	Supply 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		
4L.9	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		
4L.10	Demand side enhancements to the supply/demand balance (dry year annual average conditions)	£m	3	0.000	0.051	0.000	0.000	0.000	0.114	0.165	0.000	0.051	0.000	0.000	0.000	0.114	0.165		
4L.11	New developments	£m	3	0.000	0.000	0.000	0.000	0.000	9.355	9.355	0.000	0.000	0.000	0.000	0.000	9.355	9.355		
4L.12	New connections element of new development (CPs, meters)	£m	3	0.000	0.000	0.000	0.000	0.000	4.173	4.173	0.000	0.000	0.000	0.000	0.000	4.173	4.173		
4L.13	Investment to address raw water deterioration (THM, nitrates, Crypto, pesticides, others)	£m	3	0.000	0.836	0.000	0.000	2.563	0.000	3.399	0.000	0.836	0.000	0.000	2.563	0.000	3.399		
4L.14	Resilience	£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		
4L.15	SEMD	£m	3	0.000	-0.008	0.000	0.000	0.000	0.611	0.603	0.000	-0.008	0.000	0.000	0.000	0.611	0.603		
4L.16	NEP - Drinking Water Protected Areas (schemes)	£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		
4L.17	NEP - Water Framework Directive measure	£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		
4L.18	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		
4L.19	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		
4L.20	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	2.574	2.574	0.000	0.000	0.000	0.000	0.000	2.574	2.574		
4L.21	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
4L.22	Metering (excluding cost of providing metering to new service connections) - other	£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		
4L.23	Capital expenditure purpose - WATER additional line 1 [Other categories]	£m	3							0.000							0.000		
4L.24	Capital expenditure purpose - WATER additional line 2 [Other categories]	£m	3							0.000							0.000		
4L.25	Capital expenditure purpose - WATER additional line 3 [Other categories]	£m	3							0.000							0.000		
4L.26	Capital expenditure purpose - WATER additional line 4 [Other categories]	£m	3							0.000							0.000		
4L.27	Capital expenditure purpose - WATER additional line 5 [Other categories]	£m	3							0.000							0.000		
4L.28	Capital expenditure purpose - WATER additional line 6 [Other categories]	£m	3							0.000							0.000		
4L.29	Capital expenditure purpose - WATER additional line 7 [Other categories]	£m	3							0.000							0.000		
4L.30	Capital expenditure purpose - WATER additional line 8 [Other categories]	£m	3							0.000							0.000		
4L.31	Capital expenditure purpose - WATER additional line 9 [Other categories]	£m	3							0.000							0.000		
4L.32	Capital expenditure purpose - WATER additional line 10 [Other categories]	£m	3							0.000							0.000		
4L.33	Capital expenditure purpose - WATER additional line 11 [Other categories]	£m	3							0.000							0.000		
4L.34	Capital expenditure purpose - WATER additional line 12 [Other categories]	£m	3							0.000							0.000		
4L.35	Capital expenditure purpose - WATER additional line 13 [Other categories]	£m	3							0.000							0.000		
4L.36	Capital expenditure purpose - WATER additional line 14 [Other categories]	£m	3							0.000							0.000		
4L.37	Capital expenditure purpose - WATER additional line 15 [Other categories]	£m	3							0.000							0.000		
4L.38	Total enhancement capital expenditure	£m	3	0.000	1.349	0.000	0.000	3.350	17.091	21.790	0.000	1.349	0.000	0.000	2.564	17.091	21.004		

Key to cells:

Input cell

Calculation cell

4P - Non-financial data for WR, WT and WD - Wholesale water — South Staffordshire / Cambridge Water

Data validation

For the 12 months ended 31 March 2020

Line	Line description	Bon Code	Units	DPs	Current year	Company commentary (if required)	Completion
A	**Water resources**						
4P.1	Proportion of distribution input derived from impounding reservoirs	BN4833	Propn 0 to 1	3	0.173		
4P.2	Proportion of distribution input derived from pumped storage reservoirs	BN4834	Propn 0 to 1	3	0.266		
4P.3	Proportion of distribution input derived from river abstractions	BN4838	Propn 0 to 1	3	0.000		
4P.4	Proportion of distribution input derived from groundwater works,excluding managed aquifer recharge (MAR) water supply schemes	BN4848	Propn 0 to 1	3	0.562		
4P.5	Proportion of distribution input derived from artificial recharge (AR) water supply schemes	BN4846	Propn 0 to 1	3	0.000		
4P.6	Proportion of distribution input derived from aquifer storage and recovery (ASR) water supply schemes	BN4847	Propn 0 to 1	3	0.000		
4P.7	Proportion of distribution input derived from saline abstractions	BN4854	Propn 0 to 1	3	0.000		
4P.8	Proportion of distribution input derived from water reuse schemes	BN4855	Propn 0 to 1	3	0.000		Total of lines 4P.1 to 4P.8 do not equal 1.
4P.9	Number of impounding reservoirs	BN4830	nr	0	1		
4P.10	Number of pumped storage reservoirs	BN4849	nr	0	1		
4P.11	Number of river abstractions	BN4835	nr	0	1		
4P.12	Number of groundwater works excluding managed aquifer recharge (MAR) water supply schemes	BN4851	nr	0	42		
4P.13	Number of artificial recharge (AR) water supply schemes	BN4852	nr	0	0		
4P.14	Number of aquifer storage and recovery (ASR) water supply schemes	BN4853	nr	0	0		
4P.15	Number of saline abstraction schemes	BN4856	nr	0	0		
4P.16	Total number of sources	BN4843	nr	0	45		
4P.17	Number of reuse schemes	BN4857	nr	0	0		
4P.18	Total number of water reservoirs	BN10190	nr	0	2		
4P.19	Total capacity of water reservoirs	BN10191	Ml	0	21206		
4P.20	Total number of intake and source pumping stations	W5003	nr	0	45		
4P.21	Total number of raw water transport stations	WR001	nr	0	7		
4P.22	Total capacity of intake and source pumping stations	W5003CAP	kW	0	8563		
4P.23	Total capacity of raw water transfer pumping stations	WR002	kW	0	1685		
4P.24	Total length of raw water abstraction mains and other conveyors	BN10290	km	2	15.77		
4P.25	Average pumping head – raw water abstraction	BN4861	m.hd	2	30.13		
4P.26	Average pumping head – raw water transport	BN4862	m.hd	2	19.19		
4P.27	Total length of raw and pre-treated (non-potable) water transport mains	BN4858	km	2	143.00		
4P.28	Water resources capacity (measured using water resources yield)	BN4859	Ml/d	2	512.97		
B	**Water treatment**						
4P.29	Total water treated at all SW simple disinfection works	CPMW0098	Ml/d	2	0.00		
4P.30	Total water treated at all SW1 works	CPMW0104	Ml/d	2	0.00		
4P.31	Total water treated at all SW2 works	CPMW0110	Ml/d	2	0.00		
4P.32	Total water treated at all SW3 works	CPMW0116	Ml/d	2	0.00		
4P.33	Total water treated at all SW4 works	CPMW0165	Ml/d	2	0.00		
4P.34	Total water treated at all SW5 works	CPMW0166	Ml/d	2	225.64		
4P.35	Total water treated at all SW6 works	CPMW0167	Ml/d	2	0.00		
4P.36	Total water treated at all GW simple disinfection works	CPMW0027	Ml/d	2	73.25		
4P.37	Total water treated at all GW1 works	CPMW0033	Ml/d	2	0.38		
4P.38	Total water treated at all GW2 works	CPMW0039	Ml/d	2	9.36		
4P.39	Total water treated at all GW3 works	CPMW0045	Ml/d	2	3.23		
4P.40	Total water treated at all GW4 works	CPMW0185	Ml/d	2	80.06		
4P.41	Total water treated at all GW5 works	CPMW0197	Ml/d	2	48.99		
4P.42	Total water treated at all GW6 works	CPMW0198	Ml/d	2	0.00		
4P.43	Total water treated at more than one type of works	CPMW001A	Ml/d	2	0.00		
4P.44	Total number of SW simple disinfection works	CPMW0015	nr	0	0		
4P.45	Total number of SW1 works	BN10491	nr	0	0		
4P.46	Total number of SW2 works	BN10490	nr	0	0		
4P.47	Total number of SW3 works	BN10590	nr	0	0		
4P.48	Total number of SW4 works	BN10597	nr	0	0		
4P.49	Total number of SW5 works	BN10598	nr	0	2		
4P.50	Total number of SW6 works	BN10599	nr	0	0		
4P.51	Total number of GW simple disinfection works	CPMW0021	nr	0	12		
4P.52	Total number of GW1 works	BN10791	nr	0	1		
4P.53	Total number of GW2 works	BN10790	nr	0	2		
4P.54	Total number of GW3 works	BN10890	nr	0	1		
4P.55	Total number of GW4 works	BN10897	nr	0	16		
4P.56	Total number of GW5 works	BN10898	nr	0	6		
4P.57	Total number of GW6 works	BN10899	nr	0	0		
4P.58	Number of treatment works requiring remedial action because of raw water deterioration	W4005	nr	0	0		
4P.59	Zonal population receiving water treated with orthophosphate	BN10901	000	3	1734.551		
4P.60	Average pumping head – water treatment	BN10902	m.hd	2	2.37		
C	**Water distribution**						
4P.61	Total length of potable mains as at 31 March	BN1100	km	1	8579.5		
4P.62	Total length of potable mains relined	BN1204	km	1	0.0		
4P.63	Total length of potable mains renewed	BN1200	km	1	26.7		
4P.64	Total length of new potable mains	BN1208	km	1	57.3		
4P.65	Total length of potable water mains (<=320mm)	BN14990	km	1	7601.0		
4P.66	Total length of potable water mains >320mm - <=450mm	BN14890	km	1	317.2		
4P.67	Total length of potable water mains >450mm - <=610mm	BN14790	km	1	320.8		
4P.68	Total length of potable water mains > 610mm	BN14690	km	1	340.5		
4P.69	Capacity of booster pumping stations	BN1130UCA	kW	0	33590		
4P.70	Capacity of service reservoirs	BN1030UCA	Ml	0	495		
4P.71	Capacity of water towers	BN1130UCA	Ml	0	10		
4P.72	Distribution input	BN1000	Ml/d	2	388.01		
4P.73	Water delivered (non-potable)	BN2350	Ml/d	2	0.00		
4P.74	Water delivered (potable)	BN2330	Ml/d	2	329.08		
4P.75	Water delivered (billed measured residential)	BN2000	Ml/d	2	93.95		
4P.76	Water delivered (billed measured business)	BN2010	Ml/d	2	84.62		
4P.77	Total leakage	BN2345	Ml/d	2	81.69		
4P.78	Distribution losses	BN2340	Ml/d	2	58.47		
4P.79	Water taken unbilled	BN2327	Ml/d	2	2.89		
4P.80	Number of lead communication pipes	BN11600	nr	0	151562		
4P.81	Number of galvanised iron communication pipes	BN11610	nr	0	1442		
4P.82	Number of other communication pipes	BN11620	nr	0	428055		
4P.83	Number of booster pumping stations	BN11390	nr	0	113		
4P.84	Total number of service reservoirs	BN10990	nr	0	55		
4P.85	Number of water towers	BN11090	nr	0	13		
4P.86	Total length of potable mains laid or structurally refurbished pre-1880	BB13000	km	1	212.1		
4P.87	Total length of potable mains laid or structurally refurbished between 1881 and 1900	BB13010	km	1	83.5		
4P.88	Total length of potable mains laid or structurally refurbished between 1901 and 1920	BB13020	km	1	72.3		
4P.89	Total length of potable mains laid or structurally refurbished between 1921 and 1940	BB13030	km	1	458.1		
4P.90	Total length of potable mains laid or structurally refurbished between 1941 and 1960	BB13040	km	1	686.9		
4P.91	Total length of potable mains laid or structurally refurbished between 1961 and 1980	BB13050	km	1	1324.4		
4P.92	Total length of potable mains laid or structurally refurbished between 1981 and 2000	BB13060	km	1	1198.3		
4P.93	Total length of potable mains laid or structurally refurbished post 2001	BB13070	km	1	833.2		
4P.94	Average pumping head – treated water distribution	BN4870	m.hd	2	127.09		
D	**Band Disclosure (nr)**						
4P.95	WTWs in size band 1	WTW001NR	Nr	0	5		
4P.96	WTWs in size band 2	WTW002NR	Nr	0	6		
4P.97	WTWs in size band 3	WTW003NR	Nr	0	12		
4P.98	WTWs in size band 4	WTW004NR	Nr	0	11		
4P.99	WTWs in size band 5	WTW005NR	Nr	0	4		
4P.100	WTWs in size band 6	WTW006NR	Nr	0	0		
4P.101	WTWs in size band 7	WTW007NR	Nr	0	1		
4P.102	WTWs in size band 8	WTW008NR	Nr	0	1		
E	**Band Disclosure (%)**						
4P.103	Proportion of Total DI band 1	WTW001PN	%	1	0.8%		
4P.104	Proportion of Total DI band 2	WTW002PN	%	1	3.4%		
4P.105	Proportion of Total DI band 3	WTW003PN	%	1	9.4%		
4P.106	Proportion of Total DI band 4	WTW004PN	%	1	21.9%		
4P.107	Proportion of Total DI band 5	WTW005PN	%	1	15.0%		
4P.108	Proportion of Total DI band 6	WTW006PN	%	1	0.0%		
4P.109	Proportion of Total DI band 7	WTW007PN	%	1	18.6%		
4P.110	Proportion of Total DI band 8	WTW008PN	%	1	30.9%		

Key to cells:

Input cell

Calculation cell

4Q - Non-financial data - Properties, population and other - Wholesale water - South Staffordshire / Cambridge Water

Data validation

For the 12 months ended 31 March 2020

Line description	Bon Code	Units	DPs	Current year	Company commentary (if required)
A	**Properties and population**				
4Q.1	Residential properties billed for measured water (external meter)	BN2110	000	3	234.519	
4Q.2	Residential properties billed for measured water (not external meter)	BN2115	000	3	82.586	
4Q.3	Business properties billed measured water	BN2210	000	3	37.969	
4Q.4	Residential properties billed for unmeasured water	BN2100	000	3	358.215	
4Q.5	Business properties billed unmeasured water	BN2200	000	3	4.431	
4Q.6	Total business connected properties at year end	BN2221	000s	3	42.649	
4Q.7	Total residential connected properties at year end	BN2161	000s	3	699.991	
4Q.8	Total connected properties at year end	BN1001	000	3	742.640	
4Q.9	Number of residential meters renewed	BN1765	000	3	4.217	
4Q.10	Number of business meters renewed	BN1767	000s	3	0.570	
4Q.11	Number of meters installed at request of optants	BN1715	000	3	7.647	
4Q.12	Number of selective meters installed	BN1711	000	3	0.000	
4Q.13	Total number of new business connections	BP3405	000	3	0.210	
4Q.14	Total number of new residential connections	BP3400	000	3	5.728	
4Q.15	Total population served	BN2590	000	3	1734.649	
4Q.16	Number of business meters (billed properties)	BN11630	000	3	36.318	
4Q.17	Number of residential meters (billed properties)	BN11640	000	3	327.961	
4Q.18	Company area	SYS03	km2	0	2672	
B	**Other**				
4Q.19	Number of lead communication pipes replaced for water quality	BN1231	nr	0	149	
4Q.20	Total supply side enhancements to the supply demand balance (dry year critical / peak conditions)	W3007SO	Ml/d	2	0.00	
4Q.21	Total supply side enhancements to the supply demand balance (dry year annual average conditions)	W3008SO	Ml/d	2	0.00	
4Q.22	Total demand side enhancements to the supply demand balance (dry year critical / peak conditions)	W3007DO	Ml/d	2	0.19	
4Q.23	Total demand side enhancements to the supply demand balance (dry year annual average conditions)	W3008DO	Ml/d	2	0.19	
4Q.24	Energy consumption - network plus	BM902ECNP	MWh	0	107747	
4Q.25	Energy consumption - water resources	BM902ECWR	MWh	0	20847	
4Q.26	Energy consumption - wholesale	BM102ECWW	MWh	0	128594	
4Q.27	Mean Zonal Compliance	QEBW0180	%	2	99.98%	
4Q.28	Compliance Risk Index	QEBW0183	nr	1	3.6	
4Q.28	Event Risk Index	QEBW0184	nr	1	7.3	
4Q.30	Volume of Leakage above or below the sustainable economic Level	BN2341	Ml/d	3	-2.310	

Completion

Key to cells:

Input cell

Calculation cell

4V - Operating cost analysis - water resources

South Staffordshire / Cambrid Data validation

For the 12 months ended 31 March 2020

Line	Item description	Bon Code	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	Other	Total	Company commentary (if required)	Completion
Water resources														
A	**Opex analysis**													
4V.1	Power	BM102	£m	3	0.014	0.532	0.167	1.566	0.000	0.000	0.000	2.279		
4V.2	Income Treated as negative expenditure	BM836	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
4V.3	Abstraction charges/ discharge consents	WS1003	£m	3	0.242	1.041	0.604	0.954	0.000	0.000	0.000	2.841		
4V.4	Bulk supply	BM240	£m	3	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.003		
	Other operating expenditure													
4V.5	- Renewals expensed in year (Infrastructure)	WS1005	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
4V.6	- Renewals expensed in year (Non-Infrastructure)	WS1006	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
4V.7	- Other operating expenditure excluding renewals - direct	BM108	£m	3	0.810	0.022	0.003	0.144	0.000	0.000	0.000	0.979		
4V.8	- Other operating expenditure excluding renewals - indirect	BM110	£m	3	0.101	0.152	0.074	0.254	0.000	0.000	0.000	0.581		
4V.9	Total functional expenditure	BM816	£m	3	1.167	1.747	0.848	2.921	0.000	0.000	0.000	6.683		
4V.10	Local authority and Cumulo rates	BM817	£m	3	0.081	0.000	0.002	0.071	0.000	0.000	0.000	0.154		
4V.11	Total operating expenditure (excluding 3rd party)	BM316	£m	3	1.248	1.747	0.850	2.992	0.000	0.000	0.000	6.837		
4V.12	Depreciation	FT00865	£m	3	0.060	0.000	0.000	0.240	0.000	0.000	0.000	0.300		
4V.13	Total operating costs (excluding 3rd party)	BM319	£m	3	1.308	1.747	0.850	3.232	0.000	0.000	0.000	7.137		

Line	Item description	BON code	Unit	DPs	Water resources	Raw water distribution	Water treatment	Treated water distribution	Total
B	**Other expenditure - wholesale water**								
4V.14	Employment costs - directly allocated	BM3010	£m	3	0.536	0.001	2.029	6.015	8.581
4V.15	Employment costs - indirectly allocated	BM3011	£m	3	0.304	0.097	0.474	2.295	3.170
4V.16	Number FTEs consistent - directly allocated	W3030	Nr	0	11	3	25	171	210.000
4V.17	Number FTEs consistent - indirectly allocated	W3031	Nr	0	4	2	6	24	36.000
4V.18	Costs associated with Traffic Management Act	W3032	£m	3	0.000	0.000	0.000	0.215	0.215
C	**Service charges**								
4V.19	Canal & River Trust service charges and discharge consents	W3033	£m	3	0.000	0.000	0.000	0.000	0.000
4V.20	Environment Agency service charges/ discharge consents	W3034	£m	3	2.841	0.000	0.099	0.000	2.940
4V.21	Other abstraction charges/ discharge consents	W3035	£m	3	0.000	0.000	0.112	0.000	0.112
4V.22	Statutory water softening	W3036	£m	3	0.000	0.000	0.000	0.000	0.000

Key to cells:

Input cell

Calculated value