Severn Trent Water Limited

Accounting Separation Methodology Statement

Year ended 31 March 2018

WONDERFUL ON TAP

Severn Trent Water Accounting Separation Methodology Statement

Contents

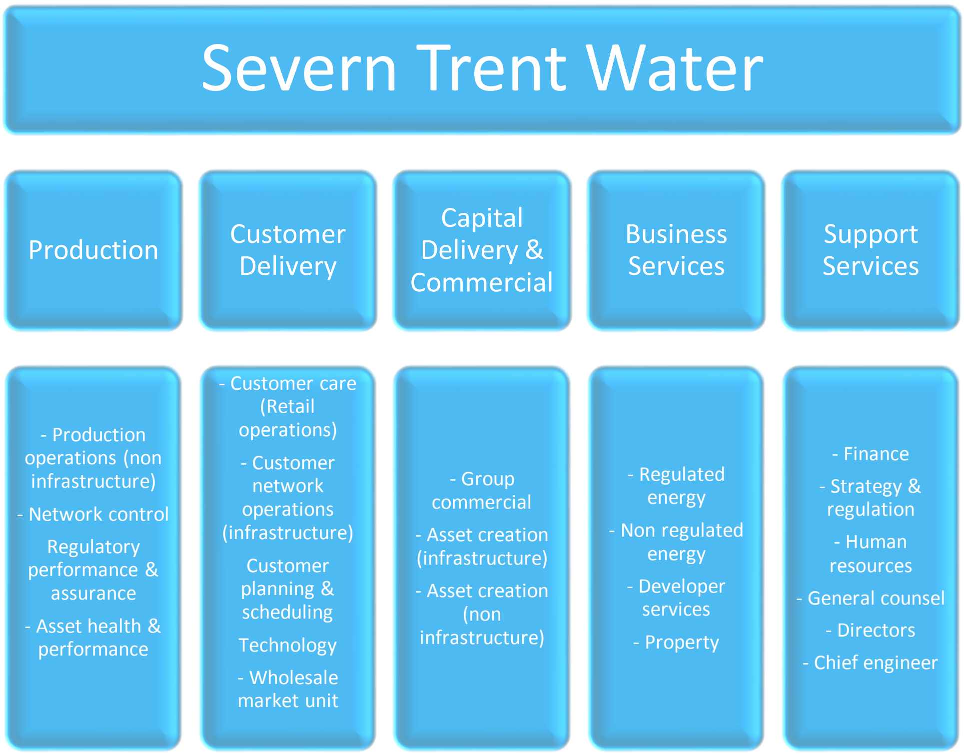
Introduction

The purpose of this statement is to explain the systems and processes used to populate tables in the Annual Performance Report (APR). We explain the methodology used in the allocation of revenue and expenditure between price controls, customer types and upstream services.

The Annual Performance Report tables can be found on our website (stwater.co.uk).

1. Business structure, systems and sources of information used to populate tables

The operating business structure at Severn Trent Water (STW) is as follows:



Systems in place
Information used to populate the tables originates from our SAP system, which was implemented in 2010. Our SAP system is interfaced with Tagetik (consolidation) and Business Warehouse (BW) systems. Financial reports are retrieved from these systems to produce the APR.

Information providers
Information in the Annual Performance Report (APR) is sourced from the operational teams within the business. In this document, we have provided details of:

- data used to populate the tables;
- the basis used for allocating income and expenditure; and
- the basis of management assumptions made in the allocation methodology.

2. Internal governance and consistency procedures

Table of responsibilities

Area	Owner	Process / activity
All financial tables	*Group Finance – Regulatory Accounting & Reporting*	Communicate regulatory reporting requirements and guidance to finance and non-finance stakeholders involved in the APR process. Co-ordinate delivery of APR tables and complete reconciliations between the statutory position and related tables. Co-ordinate external assurance for the regulatory tables.
Operational expenditure	*Finance business partners – Production, Customer Delivery, Business Services*	Determine cost allocation methodologies for price control and upstream services. Determine cost allocation methodology for third party and non appointed activities.
	Management Accounting team	Apply above cost allocation methodologies to year end financials and produce opex tables.
	Finance business partners – Production, Customer Delivery, Business Services	Undertake variance analysis against prior year and final determination.
Capital expenditure	*Strategic Asset Planning team*	Review source data capital expenditure assignments to capex regulatory categories for accuracy and provide cost allocation methodologies where applicable.
	Financial business partners - Capital Delivery & Commercial	Apply cost allocation methodologies to year-end financial and produce capex tables. Undertake variance analysis against prior year and final determination.
Fixed assets	*Capital Accounting team*	Prepare fixed asset tables by business unit and perform reconciliation between the statutory and regulatory position. Provide retail depreciation numbers for retail tables.
Revenue	*Income and debt team*	Analysis of revenue between regulatory categories.
	Finance business partners - Wholesale & Retail Revenue	Undertake variance analysis against prior year and final determination.

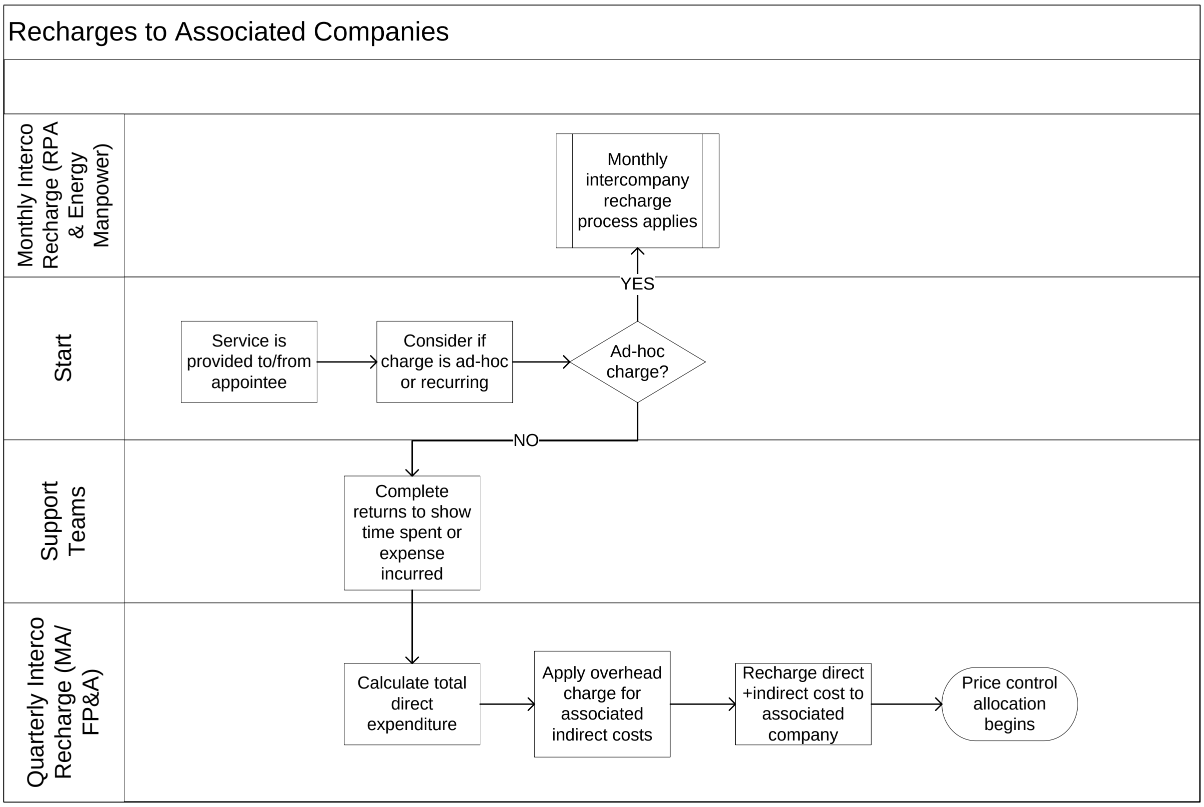
Recharges to associated companies

The process to allocate costs between price controls begins after services supplied by/to the appointee have been recharged.

The recharges can vary from ad-hoc costs to recurring charges. Ad-hoc or one off expenses are recharged via an intercompany process usually within the month they are incurred. There is an established management recharge process which is undertaken on a quarterly basis to transfer recurring expenses to/from associated companies. This process involves returns being completed which disclose time spent and expenditure incurred on activities which relate to associated companies. An overhead charge is added to this to account for the indirect costs associated with the activity. This is a percentage calculation which takes the expenditure on support functions over the total expenditure (excluding financing costs) undertaken within the business. The calculation is reviewed on an annual basis. The total direct and indirect cost is recharged to the relevant associated company.

The information is completed by the relevant support teams within the business and collated within Finance. The returns are reviewed by the Performance and Planning teams to ensure that recharges are accurate and complete. Any new activities within the company are raised by the analysts on an ongoing basis to ensure these are incorporated within the recharge process.

The price control allocation process therefore begins after recharges to/from associated has been completed. A summary of the recharges can be found in the supplementary disclosures within the Annual Performance Report.



The OPEX accounting separation process

An accounting separation spreadsheet model is used to populate the operating expenditure section of Wholesale Totex analysis and Retail operating cost analysis (Tables 2B, 2C, 4D, 4E and 4F).

Inputs into the account separation model undergo a review process:

- first stage review is performed in the relevant business area
- second stage review is performed by the regulatory accounting team and other regulatory stakeholders
- third stage review is performed by external assurance providers to confirm the cost allocation principles comply with the regulatory requirements.

The table outputs of the model are reviewed and signed off by the senior finance management team for each respective area.

The OPEX accounting separation process is further detailed below:

Owner(s)	***Process / activity***
Finance business partners – Production, Customer Delivery, Business Services	PRICE CONTROL AND BUSINESS UNIT/ACTIVITY ASSIGNMENT
	Identify direct cost centres for each respective area and assign to business units within price controls.
	Identify cost centres containing management costs, operational support costs and general and support costs which are utilised across price controls and determine appropriate cost driver to allocate the costs between price controls.
	Complete a process documentation template (PDT) for each cost driver. The PDT gives an overview of the business area, nature of activity (including non-appointed activities).
	The PDT also provides information on the cost driver applied, compliance to RAGs, and justification for assumptions made. The process for calculating the allocation percentages is documented.
Finance business partners – Production, Customer Delivery, Business Services	NON-APPOINTED AND THIRD PARTY COSTS
	Identify non-appointed and third party costs by referring to the guidance in the income categorisation table in RAG 4 to ensure completeness.
	Complete a PDT for each activity. The PDT gives a description of the non appointed activities and the type of costs incurred. The PDT also outlines the transfer price basis for the activity (market/cost) including recharge of overheads.
	A use of asset recharge methodology is included to reflect the use of appointed assets in the non-appointed operations if applicable.
	A financing charge methodology is included to cover the cost of capital associated with financing the assets where applicable.
	The transfers to non-appointed and third party costs are made before further price control allocations are applied. .

Management Accounting	APPLICATION OF ALLOCATIONS TO YEAR END FINANCIAL VALUES
	Run a download of all STW company cost centres using a SAP BW report which reports costs net of amounts which have been capitalised against projects. The costs are grouped by expense type e.g. costs of employment, materials and consumables etc.
	Adjust the total costs from the SAP report to account for items which are not captured in the report e.g. revenue reclassifications and exceptional items.
	Perform year end cost allocation calculations following the process outlined in each PDT appointed and non-appointed PDT and update model with calculated percentages/values.
Management Accounting	UPSTREAM SERVICES ALLOCATIONS
	Determine upstream allocation principles by the use of financial/non-financial information or management estimate where management information is unavailable.
	Calculate and apply allocation percentages based on methodology provided above.
Management Accounting	RECONCILIATION
	A reconciliation is performed within the model which checks that the total operating expenditure has been allocated to a price control or classified as non-appointed and that all cost centres identified as having shared costs are zero post allocation.
Finance business partner leads and senior finance managers for respective table owners *Regulatory Accounting team* *Strategy & Regulation team*	REVIEW PROCESS
	Review the final accounting separation tables.

3. Cost allocation principles and changes in allocation methodology

Our approach to accounting separation applies the general principles set out in RAG 2 and RAG 5. Ofwat has set out the following general principles which we are required to comply with.

Principle	*OFWAT requires that…*	*At Severn Trent Water…*
Transparency	The attribution methods applied within the accounting separation system need to be transparent. This requires that the costs and revenues apportioned to each service and business unit should be clearly identifiable. The cost and revenue drivers used within the system should also be clearly explained to enable a review of their appropriateness.	Our accounting separation methodology is transparent. Direct costs to price controls are identifiable and can be traced back to our SAP ledger. Methodologies for allocated costs are captured in PDTs.
Causality	Cost causality requires that costs (and revenues) are allocated to those activities and services that cause the cost (or revenue) to be incurred. This requires that the attribution of costs and revenues to activities and services should be performed at as granular a level as possible.	Wherever possible, bases for costs are allocated to activities that cause the cost to be incurred. Some costs are more remote from the activities being allocated across than others (for example costs of regulation). The method applied to allocating such costs is described in the methodology statement.
Non-discrimination	The attribution of costs and revenues should not favour any business unit within the regulated company and it should be possible to demonstrate that internal transfer charges are consistent with the prices charged to external third parties.	Cost allocation bases are as objective as possible and are not designed to favour any price controls or associated companies.
Objectivity	The cost and revenue attribution criteria need to be objective and should not intend to benefit any business unit or service.	Cost allocation bases are as objective as possible and are not designed to favour any price controls or associated companies.
Consistency	The cost and revenue attribution criteria should be consistent from year to year to enable meaningful comparison of information over time. Changes to the attribution methodology from year to year should be clearly justified and documented.	We have been consistent in our cost allocation methodology. Any changes made are outlined below.
No cross subsidy between price controls	Companies should also ensure that there is no cross subsidy between price control units. In accordance with RAG 5, transfer prices for transactions between price control units should be based on market price unless no market exists, in which case transfer prices should be based on cost.	In line with the separate binding price controls introduced in 2014, costs are compliant with RAG 5 'Guideline for transfer pricing in the water and sewerage sectors.'
Principal use	Where possible, capital expenditures and associated depreciation should be directly attributed to one of the price control units. Where this is not possible as the asset is used by more than one service, it should be reported in the service of principal use with recharges made to the others services that use the asset reflecting the proportion of the asset used by the other services.	Where possible assets and associated depreciation are directly attributed to the relevant price control and applied the principal use guidance for shared assets.

Changes in allocation methodology

Where it is not possible to allocate costs directly to price controls, we look to keep the methods of apportionment as consistent as possible. However, the material changes in the basis of allocation compared to the previous year are outlined below:

Changes in organisational design leading to direct attribution or a change in allocation

An operational restructure in November 2017 resulted in the operating model of the business changing from Wholesale, Retail and Business Service operational areas to Production (non-infra operations), Customer Delivery (customer network operations, planning & scheduling and retail operations), Capital Delivery & Commercial and Business Services (Regulated energy and non-regulated).

Whilst the front line operations activities retained the existing price control assignments, a full review management and operational support cost centres was made to charge costs direct to business unit where possible and to determine the appropriateness of existing cost drivers. The move from a Wholesale structure to an infra/non-infra structure provided an opportunity to directly assign more Wholesale support costs which were previously being allocated.

The retail teams also reviewed their allocation of retail management support costs as part of the changes to further align costs to retail activities.

Enhanced management information to enable direct allocation or aid cost allocation

Water power costs

RAG 2 confirms that Pumping head' is the preferred driver to be used where pumps perform a joint function for both Water resources - Raw water abstraction and Network+ activities. The definition of average pumping head in Appendix 2 of RAG 2 has been applied in completing Average Pumping Head data in Table 4P (Non-financial data for WR, WT and WD - Wholesale water).

The business unit non financial data in Table 4P has subsequently been applied to the financial data to allocate power costs between Water Resources and Water Network +.

Waste water power costs

We have moved from an allocation approach of power costs between sewage collection and sewage treatment to direct assignment. We have also reviewed the allocation of power costs between co-located sewage and sludge treatment works as we are reviewing their site energy management plans on a more frequent basis.

Waste water rates costs

We have revised the allocation of waste water rates excluding sewage collection from allocations as rates are not chargeable on drains and pipes.

Changes/clarification in RAG guidance or arising from OFWAT reviews in specific areas

Bulk Supplies

In 2016/17, bulk supplies purchases were allocated to price control dependent on whether raw water or treated water was purchased. RAG 2 confirms that costs are to be split between Water Resources and Water Network + using:

1. Data provided by exporting company as to the treatment cost incurred in additional to supplying the original raw water; or
2. The average cost of the exporting company as a guide to a split of the cost (as shown in the APR).

The average cost of the exporting company has been used as a guide for allocating bulk supply costs between Water Resources and Water Network + in the APR.

4. Wholesale variance analysis to the prior year

Wholesale Water

OPEX analysis

Operating expenditure	*Current year figures (£m)*	*Prior year figures (£m)*	*Variance (£m)*	*Variance (%)*	*Commentary*
Water Resources					
Power	(4.2)	(9.1)	4.9	53.8%	The favourable variance is predominantly driven by a change in the cost allocation methodology between business units (see section 3). This saving is offset by an adverse variance in Raw Water Distribution. In addition, there has been a 6% inflationary increase in power prices; and a 2% increase in water usage compared to prior year.
Abstraction charges	(11.3)	(11.4)	0.1	0.9%	Abstraction charges are in line with prior year.
Bulk Supply	(9.0)	(8.0)	(1.0)	(12.5%)	The adverse variance is largely due to the freeze-thaw incident in February 2018.
Other operating expenditure (excluding atypicals)	(15.0)	(15.2)	0.2	1.3%	Employee capital cost allocation increased as a result of increased activity on groundwater and distribution reservoirs in line with the NEP Programme.
Raw Water Distribution					
Power	(10.8)	(2.4)	(8.4)	(350.0%)	The negative variance is predominantly driven by a change in the allocation methodology between business units. The increased power spend in Raw Water Distribution, is offset by the positive variance in Water Resources.

Operating expenditure	*Current year figures (£m)*	*Prior year figures (£m)*	*Variance (£m)*	*Variance (%)*	*Commentary*
Other operating expenditure (excluding atypicals)	(6.6)	(6.2)	(0.4)	(6.5%)	The adverse variance is due to increased incidents relating to the freeze-thaw in February 2018.
Infrastructure renewals expenditure (IRE)	(0.8)	(1.6)	0.8	50.0%	Spend remains in line with plan on Pro-active Dams and Reservoirs maintenance.
Water Treatment					
Power	(4.4)	(25.3)	20.9	82.6%	The favourable variance is predominantly driven by a change in the allocation methodology between business units. The increase in Treated Water Distribution power costs is offset in the Water Resources business unit. In addition, there has been a 6% inflationary increase in power prices; and a 1% increase in water usage compared to prior year.
Other operating expenditure (excluding atypicals)	(49.0)	(55.8)	6.8	12.2%	Employee capital cost allocation decreased compared to prior year. This is partially due to strategic efforts to improve productivity and bring more capital work in-house. The favourable variance is also driven by increased direct assignment of costs following the infra/non-infra reorganisation of the business. Insurance and compensation expenses allocations are now based on claims (largely burst/flooding related). Hence, the decreased spend in Water Treatment is offset by an increase in Treated Water Distribution.

Treated Water Distribution					
Power	(31.3)	(9.9)	(21.4)	(216.2%)	A change in allocation methodology based on improved average pumping head data is driving the majority of the increase in power costs. This adverse variance is offset by the favourable variance in Water Treatment. Though distribution input volumes are relatively constant against prior year, the adverse variance is underpinned by an increase in the average power price inflation of 6%.
Other operating expenditure (excluding renewals)	(89.3)	(75.4)	(13.9)	(18.4%)	A change in organisational design has led to improved allocation of wholesale costs between business unit (see Water Treatment above). This coupled with an increase in incident related expenditure during the year are the predominant drivers of the increase in spend.
Infrastructure renewals expenditure (IRE)	(81.9)	(83.6)	1.7	2.0%	Spend remains in line with prior year, as planned.

Atypical expenditure

An exceptional gain of £8.3 million arose (2016/17: gain of £16.6 million) from the net benefit, after implementation costs, of a Pension Increase Exchange arrangement, under which members of the defined benefit schemes will be offered the opportunity at retirement to exchange future non-statutory inflationary increases in a portion of their pensions earned prior to 1997 for a higher pension payment now. In the prior year the exceptional gain arose from a similar exercise for existing pensioners.

This has been allocated to Water, Waste water and Retail pro-rated on FTE. The gain allocated to Water of £3.4m has been allocated to Water resources (£0.4m), Raw water distribution (£0.1m), Water treatment (£1.4m) and Treated water distribution (£1.5m).

CAPEX analysis

Overall the Water CAPEX net investment in 2017/18 was £297.7m. This is £69.8m (30.6%) higher than the full year investment in 2016/17 and is in line with our delivery programme which reflects investment to support delivery of our performance commitments and statutory requirements.

Business unit	*Current year figures (£m)*	*Prior year figures (£m)*	*Variance (£m)*	*Variance (%)*	*Commentary*
Water Resources	39.1	15.7	23.4	149.0%	Variance reflects the increased spend on Birmingham Resilience Project as the project enters its delivery phase.
Raw Water Distribution	42.1	33.9	8.2	24.2%	Variance reflects the increased spend on Birmingham Resilience Project as the project enters its delivery phase.
Water Treatment	106.0	72.5	33.5	46.2%	Variance reflects the increased spend on various projects in line with the capital plan.
Treated Water Distribution	110.5	105.8	4.7	4.4%	Variance reflects the spend on projects such as distribution reservoirs per capital plan.

Wholesale Waste Water

OPEX analysis

Operating expenditure	Current year figures (£m)	Prior year figures (£m)	Variance (£m)	Variance (%)	Commentary
Sewage Collection					
Power	(7.6)	(13.3)	5.7	42.9%	We have moved from an allocation approach of power costs between sewage collection and sewage treatment to direct assignment.
Local authority rates and Cumulo rates	(0.1)	(4.8)	4.7	97.9%	We have revised the allocation of waste water rates excluding sewage collection from allocations as rates are not chargeable on drains and pipes.
Sewage Treatment					
Power	(33.6)	(27.3)	(6.3)	(23.1%)	The adverse variance is predominantly driven by a change in the allocation methodology between business units. In addition, there has been a 6% inflationary increase in power prices.
Discharge consents	(5.5)	5.5	0.0	0.0%	Spend is in line with prior year.
Local authority rates and Cumulo rates	(23.1)	(19.5)	(3.6)	(18.5)%	See Sewage collection above.
Sludge					
Power	10.7	12.0	(1.3)	(10.8%)	Higher power consumption in sludge treatment sites as well as updated methodology on allocated power sharing on co-located sites where allocation to sewage collection has been updated. This is offset by in year increases in generation.
Income treated as negative expenditure	18.7	17.6	1.1	6.2%	Increased generation has driven increased renewable incentives.

Other operating expenditure	(45.3)	(51.7)	6.4	12.4%	Overall spend is favourable. This is primarily related to better labour allocations and reduced spend from hired and contracted services.

Atypical expenditure

The Pension Increase Exchange exceptional gain allocated to Waste water of £2.6m has been allocated to Sewage collection (£0.7m), Sewage treatment (£1.4m), and Sludge (£0.5m).

We have made an early start in preparing our Bioresources business for AMP7. We have developed our business model and identified the actions that we need to take to compete effectively in the new market, determining the lowest cost structure from our existing network of sites, optimising our tanker fleet operations and identifying opportunities for trading in the new market. We have implemented a programme to reorganise the business to deliver our business model, reducing from 20 sites to 12, and as a result incurred exceptional costs of £20.9 million as follows:

- Set up and restructuring costs £2.1 million;
- Write-off of assets that will not be used in the new business £16.8 million; and
- Provision for costs to decommission these assets of £2.0 million.

CAPEX analysis

Overall the Wastewater CAPEX net investment in 2017/18 was £277.7m. This is £62.2m (13.1%) higher than the full year investment in 2016/17 and is in line with our delivery programme which reflects investment to support delivery of our performance commitments and statutory requirements.

Business unit	*Current year figures (£m)*	*Prior year figures (£m)*	*Variance (£m)*	*Variance (%)*	*Commentary*
Sewage Collection	79.1	59.1	20.0	9.6%	The increase in spend is per budget. This was factored into the Year 3 budget for AMP 6.
Sewage Treatment	142.4	111.7	30.7	27.7%	The increase in spend is per budget. This was factored into the Year 3 budget for AMP 6.
Sludge	56.2	44.7	11.5	25.7%	The increase in spend is per budget. This was factored into the Year 3 budget for AMP 6.

5. Retail variance analysis to the prior year

Retail household total operating cost of £90.9m (this includes depreciation of £3.9m). The total operating cost is £6.2m (7.3%) higher than the prior year. An analysis of significant variances compared to the prior year is outlined below:

Retail household

Business unit	*Current year figures (£m)*	*Prior year figures (£m)*	*Variance (£m)*	*Variance (%)*	*Commentary*
Customer services	(32.1)	(31.0)	(1.1)	(3.5%)	The adverse variance is driven by an increase in the costs allocated to network customer enquiries and complaints – COSC. An additional allocation has been made to reflect activities undertaken by the planning and scheduling team to support providing retail customers with operational updates.
Debt management	(12.0)	(7.3)	(4.7)	(64.4%)	The adverse variance is predominantly driven by a change in the allocation methodology between retail activities. This has led to a more accurate allocation of management costs to debt management. Debt management now includes the cost of write-off of court fees and additional recovery costs added to customers' bills.
Doubtful debts	(25.0)	(20.6)	(4.4)	(21.4%)	A bad debt performance of 2.2% reflects management's best estimate of debt risk at the end of the financial year, resulting in an increased level of prudence in the bad debt provision year on year. Doubtful debts have also increased as a result of an accounting adjustment between IFRS and UK GAAP, the final year of which was applied in 2016/17.
Meter reading	(4.6)	(5.4)	0.8	14.8%	This favourable variance has been driven by efficiencies realised in the meter reading function and a refinement in allocation of management costs to meter reading.
Other operating expenditure	(17.1)	(19.2)	2.1	11.1%	Mainly driven by a reduction in the allocation of general and support costs.
Atypical expenditure	1.8	2.6	(0.8)	(32.3%)	Retail share of Pension Increase Exchange exceptional gain.

6. APR Section 2 Methodology – Price review and other segmental reporting

2A Segmental income statement

The segmental income statement analyses the appointed activities' operating profit between price controls and summarises the recharges made to/from other segments for the use of fixed assets.

2A line item	*Price controls*	*Data source*	*Process*
Revenue price control	All	SAP general ledger codes which captures the financial values for wholesale and retail charges via an interface from the main billing system (Target).	Assign each revenue code to wholesale water and waste water charges and retail revenue to Retail household. Refer to table 2I for further detail.
Revenue non price control	All	SAP general ledger codes which captures the financial values for all non price control revenue via the receivables billing ledger.	Separate general ledger codes are created for each non price control revenue stream. Each revenue stream is assigned to an income category using the guidance in the Income categorisation table included in RAG 4. Price control assignment takes place when the transaction is posted in SAP, against profit centres which are assigned to price controls. Specific items that are netted off against operating costs within the statutory accounts are grossed up and shown as revenue for regulatory reporting. Such examples are developer contributions for administration costs which are incurred in relation to new connections and recharges for repair of damages costs. A review is performed at the end of the year to ensure that the correct price control assignment has been made and adjusted where necessary.
Operating costs	Retail	Table 2C Operating costs analysis – retail	Operating costs from table 2C. Refer to table 2C for further detail.
	Wholesale water and waste water	Table 2B Totex analysis – wholesale.	Operating costs from table 2B. Refer to table 2B for further detail.
Depreciation and amortisation	All	Table 2D – Historic cost analysis of fixed assets SAP fixed asset register	Depreciation and amortisation charges are charged to the principal user price control. Refer to table 2D for further detail.

Other operating income	All	SAP fixed asset register	Analysis of profit/loss on disposal of assets by reference to the cost centre and related profit centre the asset was assigned to when in use.
Recharges to/from other segments	All	SAP fixed asset register and Accounting Separation model	Asset depreciation charges are used as a proxy for the transfer price recharges between price controls for the use of shared assets. All management and general asset cost centres are assigned an appropriate opex cost driver to allocate costs across price controls. The same cost driver determines the relative proportion of depreciation that should be assigned to each price control. The price control with the largest allocation is deemed to be the principal user. The full depreciation cost for these assets is charged to the principal user. The recharge to/from segments is then calculated using the cost drivers allocation percentages applied to the depreciation charge.
Surface water drainage (SWD) rebates	Water	Resolve system Tariff Team Complaints Team	A system report is run which identifies the value and the volume of SWD rebates for the required period. This is added to SWD rebates issued by the Complaints Team. A system report is run on Resolve to confirm the value of SWD rebates that the complaints team have issued during the financial year.

2B Totex analysis – wholesale

The Wholesale Totex analysis disaggregates the Wholesale price control costs into Water Resources, Water Network+, Waste water Network+ and Sludge by assignment of business units outlined below:

Price control	***Business unit***
Water resources	Water resources
Water Network+	Raw water distribution Water treatment Treated water distribution
Waste water network +	Sewage collection Sewage treatment
Sludge	Sludge collection Sludge treatment Sludge disposal

Assignment of cost centres into direct business units occurs at the same time that the price control assignment is carried out. Cost centres which are identified as being shared between price controls are allocated to a business unit by using either the same cost driver used to allocate at price control level or by a different cost driver if more appropriate. Cost centres which relate entirely to a price control but more than one business unit are allocated using appropriate cost drivers. Upstream services allocation occurs once the business unit allocation is complete.

Business unit allocations are explained below:

Operating Expenditure - water and wastewater

Operating expenditure	*Expense type*	*Price control*	*Business unit allocation*
Power	Power	Water	Average pumping head allocation based on non-financial data in Table 4P.
		Waste water	Direct assignment to cost centre which is assigned to business unit based on cost centre activities. For co-located sites, in the absence of a sub-meter, the electricity bill is allocated between Sewage Treatment and Sludge Treatment based on the Site Energy Management Plan (SEMP).
	Shared Carbon Reduction Commitment payments	Water and Waste water	Allocated based on direct costs of power charged to water and waste water.
	Internally generated electricity	Water and Waste water	Cost credit – direct to price control where it was generated (Sludge). Cost expense – direct to price control where electricity was utilised at market rates.
Income treated as negative operating expenditure	ROCs	Water and Waste water	Allocation based on Gwh generated - Water - 100% Raw water abstraction (hydro generation). Waste water – 100% sludge treatment.
	Bio methane sales & RHI	Waste water	100% Sludge treatment.
	Sludge sales	Waste water	100% Sludge disposal.
Service charges	Abstraction charges	Water	100% Water resources.
	Discharge consents (water treatment)	Water	100% Water treatment.
	Surface water network	Waste water	100% Sewage collection.
	Discharge consents	Waste water	100% Sewage treatment.

Bulk supply	Raw water supplies Treated water supplies	Water	100% Water resources - Elan Valley only. Other suppliers to be pro-rated based on the associated company Table 2B APR splits between Water resources & Water treatment.
Renewals expenses in the year (infrastructure)	Infrastructure renewals expenditure	Water and Waste water	Refer to Capital expenditure section below.
Renewals expenses in the year (non-infrastructure)	Non-infrastructure (NI) renewals expenditure	Water and Waste water	Non-infrastructure renewals expenditure is included in hired and contracted, materials and consumables and employment costs within the respective cost centres incurring the costs. To identify these separately a work force management report is run selecting the activity types associated with NI renewals. The expenditure of the activity types is deducted from the expense line in the relevant cost centres and reclassified to the NI renewals line.
Other operating expenditure	• Employment costs Staff costs (excludes hired and contracted) • Hired and contracted services • Materials and consumables • Other costs – utility costs, insurances, bad debt costs, OFWAT fees, fines, subscriptions, postage & printing, defined benefit administration fee, audit fees and recharges to/from other group companies	Allocated to water and waste water directly based on activity or by the use of appropriate cost drivers	Directly allocated to business units by the use of cost centres which are assigned to business units. Where other costs relate to more than one business unit they are allocated between the business units by: • identifying specific cost drivers by retrieving the relevant management information; • management estimate where management information is not available; or • pro-rated on total direct costs of business

			units excluding rates, service charges, power and negative operating costs before general and support expenditure allocations.
Local authority rates	This includes both local authority rates and Cumulo rates.	Sewage and sludge works are individually rated	Based on non-infra GMEAV of waste water assets into Sewage treatment and Sludge treatment.
		Water (Cumulo) rates	Pro rata to the gross MEAV value of infra and non-infra assets assigned to each water business unit.
		Water and waste water (office buildings)	Floor space occupied.
Third party services	Fluoridation	Water	Water treatment
	Fire Hydrants		Treated water distribution
	Bulk Water		Water resources (non-potable) and Water treatment (potable)
	Hydro dams and reservoir management		Water resources
	Standpipe usage		Water treatment
	Building water supplies		Water treatment
	Rechargeable works for repair of damages		Treated water distribution
	Rechargeable works for repair of damages	Waste water	Sewage collection
	Building over agreements		Sewage collection

Costs relating to general and support (G&S) activities are assigned to the appropriate cost line above and are allocated to price control and business units using costs drivers outlined in Section 7.

Capital expenditure

- A SAP business warehouse report produces a detailed view of infrastructure renewals expenditure and capital expenditure and income by business plan line (BPL). Each BPL consists of a series of individual projects, with the total of c.5000 projects over the capital programme.
- Each BPL is aligned to a regulatory driver and can have a one-to-one or one-to-many relationship. The drivers are listed below and recorded in the below lines of the Totex table:

Regulatory driver	*Table line*	*Infra/non infra allocation*
Infrastructure renewals expenditure (IRE)	4D/E.5	100% infra
Maintenance non-infra (MNI)	4D/E.13	100% non-infra
Enhance levels of service Quality Supply/demand balance	4D/E.14-15	Infra/non-infra allocation determined by the purpose code mapping which is assigned at source in SAP

- The regulatory mapping is assigned at source level in SAP with each project being assigned to a business plan line attributed to Water Resources, Water Network +, Waste Network +, Bio-resources or Management & General.
- The price control BPL assignment is determined by reference to the nature of the spend in the BPL against the regulatory assets, activities and boundaries outlined in RAG 4.
- An annual review of mappings is performed for the current year end. Where it is deemed that the mapping requires updating due to a change to the delivery of the project since the initial mapping (due to change in scope or solution), the regulatory assignments are updated.
- A download of the capital programme is reviewed at the year end by the Strategic asset planning team to identify any expenditure which may have been coded incorrectly at source so this can be corrected.
- The exercise also includes assigning the expenditure to business unit level to complete tables 4D and 4E. Assignment can be at the BPL in total or by analysis within BPL if appropriate. The business unit BPL assignment is determined by reference to the nature of the spend in the BPL/project against the regulatory assets, activities and boundaries outlined in RAG 4.
- The assignment of material schemes/projects are also reviewed by Strategic Asset Planning (in S&R).
- The total income and expenditure is reconciled to the year end schedules produced by the Capital Accounting team, the net IRE expenditure including IRE income is then recorded in to the operating expenditure section of the Totex tables.
- M&G expenditure is allocated as below:

Capex spend	*Price control/business unit allocation*
IT projects – Retail IT spend	Allocated entirely to retail.
IT projects – Wholesale IT spend	Based on management estimate.
Transport projects	Based on the portion of transport recharges in the year to each price control/business unit.
Property projects	Based on the nature of spend, the area of the business it benefits and the property/site it relates to.

Cash Expenditure

Cash expenditure	*Price control allocation*	*Business Unit allocation*
Pension deficit recovery payments	Pro-rate cost against the number of employees in each price control who are members of the scheme.	Same as direct business unit cost percentages used in operating cost allocation.

2C Operating cost analysis – Retail

Where cost centres do not have teams aligning to discreet retail activities, the initial allocation of costs into retail activities e.g. billing or payments handling have been apportioned based on management information or management estimate. The apportioned costs to the retail activities are subsequently allocated to retail household and non-household referring to RAG 2 for guidance on allocation.

Costs associated with the relevant cost centres are downloaded from the financial ledger using a SAP Business Warehouse report and used as the starting point for the allocation of costs to activities. In addition, there are certain costs which are recorded outside of the Retail operational teams but which are included in the Retail price control for regulatory reporting. These costs are identified and transferred from the relevant areas of the business. General and support expenditure is also attributed to the Retail business.

The direct costs of the Retail business comprise the following teams which deal with all customers.

Team responsibilities and allocation to activities

Business Area	*Team(s) / activity*	*Retail activity types*	*Cost allocation/driver*
Chief Customer Officer	Customer Delivery Strategic Management Team.	Cost is apportioned between: Billing, payments handling, debt management, vulnerable customer schemes, non-network customer enquiries and complaints, meter reading and maintenance, network customer enquiries and complaints, other direct costs; and wholesale price controls. Some of these costs are also apportioned out to G&S.	Business activity allocations of the cost centres which the management team support (excluding specific costs such as bad debts and charitable Trust Donations).
Performance & Planning Analyst	Performance & Planning teams align closely with key business areas to provide financial and operational support.	Cost is apportioned between: billing, payments handling, debt management, vulnerable customer schemes, non-network customer enquiries and complaints, meter reading and maintenance, network customer enquiries and complaints, other direct costs; and wholesale price controls.	Business activity allocations of the cost centres which the management team support (excluding specific costs such as bad debts and charitable trust donations).
Resource planning	Provides support to internal call centre teams in all aspects relating to Resource Planning; using data for forecast call volumes etc. to ensure we have the right people, in the right place, at the right time, to provide the right levels of customer service. Costs within these cost centres are predominantly people costs relating to the resource planning and scheduling teams.	The costs are split between billing, payments handling, non-network customer enquiries and complaints, meter reading, meter maintenance and network customer enquiries and complaints and NHH.	The resource planning cost centres are allocated to activities based on the overall allocations of the other cost centres (excluding costs such as bad debts and charitable trust).

Business Area	Team(s) / activity	Retail activity types	Cost allocation/driver
Customer Strategy	The bad debt expense is also recorded in this area and directly allocated to doubtful debts. Teams consist of: External relationships – deal with vulnerable customers Debt strategy team – activity based debt management CARMS team - debt collection system admin team Partner accounts team - management of third party contracts for customer service and debt management agencies	An apportionment of the costs of the management team based on the consolidated total cost allocations of the other Customer cost centres.	Doubtful debt provision - 100% to doubtful debts. Annual contribution to the Severn Trent Trust Fund - directly allocated to the Charitable Trust Donations retail activity within Customer Services. The cost of paying third parties to administer our social tariff schemes, the Citizen's Advice Bureau, Auriga (Severn Trent Trust Fund) - directly allocated to the Vulnerable Customer Schemes retail activity within Customer Services The balance remaining in the Head of Strategy cost centre after removing the above costs, is a management overhead of the Customer Strategy function and needs be allocated to retail activities across the cost centres within Customer Strategy based on the value of each of the cost centres. The Partner Account Manager is a single cost centre. The activities within this cost centre relate to billing, payments handling, debt management, non-network enquiries and complaints. The split of the costs is based on a management analysis of costs and their relation to business units.
Group Transformation	These cost centres deliver process improvements and produce management information for the Customer management team.	Cost is apportioned between: billing, payments handling, debt management, vulnerable customer schemes, non-network customer enquiries and complaints, meter reading and maintenance, network customer enquiries and complaints, other direct costs; and wholesale price controls.	Retail activity allocations of the cost centres which the management team support.

Business Area	*Team(s) / activity*	*Retail activity types*	*Cost allocation/driver*
Customer Contact	This department comprises our customer contact centres and associated back office teams which have responsibilities in respect of billing, payment handling, debt management (inbound/outbound contact), meter reading and non-network enquires and complaints and, network enquires and complaints.	The costs of our customer contact cost centres are apportioned between billing, payment handling, meter reading and non-network enquiries based on volumetric call data, where the system identifies the reasoning behind the calls. An analysis of these call volumes has produced the spilt across the business units.	The COSC and Customer Services costs comprise two cost centres. The activities within these cost centres relate to customer contact regarding enquiries and complaints around our network, billing and payment handling. The split of the costs is based on a management analysis of costs and their relation to business units. COSC is a contact centre for any calls relating to the network. Costs predominantly relate to manpower and are allocated to business activity Network Enquiries & Complaints. There are also Back office teams responsible for and liaising with customers administering applications for Help When You Need It schemes (Social Tariff, Watersure, Water Health Check, Proactive Metering). The costs are directly allocated to Vulnerable Customer Schemes.
Customer Experience	Ensures that dealing with Severn Trent is an experience that meets and exceeds expectations for all customers whatever their individual needs. This includes mapping and detailing quality processes, and management of customer complaints.	The costs are apportioned based on an average of all other retail cost centres excluding Chief Customer Officer and Performance & Planning.	Costs and activity volumes within this cost centre is driven by volumes of customer complaints. The costs are predominantly relating to people who are handling complaints plus amounts of compensation and gestures of goodwill paid to customers as a result of operational or billing issues.
		The cost of the team is apportioned between billing, payments handling, debt management, vulnerable customer schemes, non-network customer enquiries and complaints, meter reading and maintenance, network customer enquiries and complaints, other direct costs and wholesale price controls.	Allocation is based on the business activity allocations of the cost centres which the team support (excluding specific costs such as bad debts and charitable trust).

Business Area	*Team(s) / activity*	*Retail activity types*	*Cost allocation/driver*
Metering	The billing enquires teams deal with investigation and resolution of customer's bill queries in each region. Undertaken by field based engineers (CSRAs) - predominantly people costs.	The total costs incurred and recorded within these cost centres can be allocated directly to a business activity within retail household.	100% non-network enquiries and complaints.
	Metering Scheduling team plan and schedule all of the Customer Service Resolution Advisors (CSRAs) field work, for the three billing enquiries teams - predominantly people costs.	The total costs incurred and recorded within these cost centres can be allocated directly to a business activity within retail household.	100% non-network enquiries and complaints.
	IRM Fropt/IRM Team Manager 2 are back office teams responsible for liaising with the customer re: new meter installation, meter exchanges (replacements) and other meter related data.	The total costs incurred and recorded within these cost centres can be allocated directly to a business activity within retail household.	100% non-network enquiries and complaints.
	The Meter reading team are costs relating to planning, scheduling and execution of meter reads. Predominantly people costs and costs of fuel, lease vehicles for meter readers the business activity are allocated to meter reading.	The total costs incurred and recorded within these cost centres can be allocated directly to a business activity within retail household.	100% meter reading.
	The IRM Team Manager cost centre containing the costs of the Amey Metering Contract - Installation, Repairs & Maintenance of water meters.	The total costs of the cost centre are charged to Water	100% Treated water distribution.

Retail transfers to and from other business areas

Distribution Services Technicians (DSTs) – The activities associated with investigatory visits in relation to water incidents sit within the Wholesale water teams. However, first time visits for issues that are on a customer property (where no further work is undertaken) and where there was no network issue found are considered retail activities. The cost of initial inspections has been taken from time and materials recording in SAP for these jobs. Direct overhead costs are then attributed to the jobs. The costs relating to these jobs are transferred to Retail within the Customer Services activity.

Water Efficiency Team – The majority of the demand side water efficiency initiatives are performed in a wholesale operational cost centre within Severn Trent Water. The total expenditure of the Water Efficiency cost centre is transferred to Retail and allocated 100% to Demand side water efficiency initiatives. The total of the expenditure transferred from Wholesale together with the efficiency expenditure incurred within Retail is compared to the Retail water efficiency baseline for costs (calculated at AMP5 average costs). Any expenditure above the baseline is considered to be Wholesale expenditure in relation to meeting Wholesale outcomes. This element is therefore transferred back to Wholesale and assigned 100% to Treated Water Distribution.

Customer Side Leaks – The activities in relation to fixing customer side leaks are undertaken by the Wholesale water teams. They are identifiable and are captured in Workforce Management. The costs of the initial visit and follow up visit along with the associated FTE are transferred to Retail and allocated 100% to Customer Side Leaks.

General and Support Expenditure – General and support expenditure is allocated to Retail using appropriate cost drivers determined for each support function. Please refer to the section 7 for the general and support allocation methodology.

Allocation to Household (HH) / Non-household (NHH)

Severn Trent Water disposed its non-household retail business to Water Plus. All costs are recorded in HH and relate to HH. There is some activity which relates to NHH but these are recharged to Water Plus and recovered by a TSA which is netted off in the costs.

There is also an allocation charge into Retail NHH from Wholesale Developer Services. These are for services to:

- provide developer information – deal with questions from developers where physical aspects of infrastructure are required to change, investigate and advise on implications;
- provide connections for developers – including project management, contracting with third parties; and
- administer new connections.

The overheads in relation to the above activities are also allocated to Retail NHH.

2D Historical cost analysis of fixed assets - Wholesale and Retail

The tangible fixed asset table is calculated allocating assets in the SAP fixed asset register to price control via use of cost centres and profit centres and allocating the work in progress (WIP) to price control via analysis of projects.

FIXED ASSET REGISTER

The full historic cost fixed asset register is downloaded into excel. Each asset has a cost centre assigned to it. Additional attributes are added to the data to enable the completion of the fixed asset table:

- Infra/non infra classification - this classification is based on the asset class code given to the asset
- Income/expenditure classification - as the fixed asset table excludes capital income (which is reclassed to deferred income in the balance sheet), all income asset class codes are excluded from the table
- Intangible/Tangible classification - Table 2D is only applicable for Tangible assets, therefore intangible assets are excluded
- The profit centre that the cost centre is assigned to is added to the register by looking up to a SAP cost centre download provided by Management Accounting. This is used to determine the price control and the relevant business unit and support area for Management & General (M&G) assets
- An adjustment is made to change the profit centre where the profit centre assigned to the cost centre was set up incorrectly in SAP

M&G principal user assignments

The percentages from the G&S opex allocations are applied to determine the principal user to be identified. This is the business unit with the highest percentage allocation. Where the finance business partner believes that the asset principal user is different from the opex percentages or where there is no opex activity in the cost centre, the principal user identified by the finance business partner is used instead.

Principal user cannot change year on year so once it has been assigned this is permanent. Recharges to/from calculations for Table 2A are then determined by multiplying the relevant depreciation by the opex cost drivers

Management and general assets are assigned to a principal user using the following bases:

Business area	*Basis of assignment*
Information systems	Assignment using IS business area costings
Transport	Assignment on the basis of vehicle recharges
Property services	Assignment on the basis of floor space used
Business Planning	Assignment based on price control FTE
COSC	Assignment based on Network control cost driver
Visitor sites	Assignment to water resources

Reclassifications

Other adjustments are made to record changes required to the underlying fixed asset register. This may be because assets have been posted to the incorrect cost centre at source or to include late adjustments at year end posted in Tagetik once SAP has closed.

Meter reclassifications - Water meter consumer boxes (infrastructure assets) which are recorded in Retail cost centres which are reclassified to Wholesale treated water distribution for regulatory purposes.

Reservoir reclassification – this arises as a result of the specific RAG 4 guidance on the classification of reservoirs (See Section 2. Disaggregation of wholesale activities – upstream services - raw water abstraction and raw water storage asset definitions).

Water resources (Raw water abstraction) reservoirs are those that have:

(1) their own abstraction licence or
(2) natural catchment or
(3) support downstream abstraction or
(4) None of the attributes of (1) to (3) above but have 15 days or more usable storage

Water Network + (Raw water storage) reservoirs are those that are:

Storage reservoirs and other storage assets that are not captured by the definitions in raw water abstraction and have less than 15 days usable storage

Water cost centres are set up at an area level whereby multiple sites are assigned to a cost centre. We therefore use the finance location which is assigned to each reservoir site to identify which cost centre and therefore which profit centre and price control business unit the asset has been assigned to in the fixed asset register. This is reviewed against the RAG 4 guidance and those requiring reclassification are identified. The respective values are then transferred from Water Resources to Water Network +.

The above adjustments have taken place in the fixed asset table in the current year, hence a reclassification of the opening balance position has been recorded in the adjustments line in 2D.

Other adjustments

All entries in the fixed asset register are posted to the SAP general ledger in specific GL codes which only allow auto-postings from the fixed asset register and WIP listing. There is sometimes a requirement to enter journals in addition to the auto postings, these are posted into manual GL codes.

Year on year journals to manual codes include the gross depreciation accrual, abandonment depreciation accrual and WIP abortives accrual. The price control assignment is determined from the site the accrual relates to.

The other manual adjustments primarily relate to legacy adjustments arising when the company moved from Oracle to SAP. These are allocated to price control on an estimated % base allocation. These will be permanent journals which roll forward every year.

Other one-off adjustments relate to journals arising during the year end process but are posted directly into Tagetik rather than SAP as the ledgers have closed. The price control assignment is determined from the site the adjustment relates to.

As a result of detailed activities in preparation for PR19, additional review activities have been performed in relation to accuracy of assets assigned to cost centres and price controls. This has led to transfers in the adjustments line in the cost and depreciation sections of the fixed asset table which related to resetting the opening position of the adjustments outlined above.

WORK IN PROGRESS

The WIP ledger is extracted from SAP with line by line detail of project. Each project includes water/waste/bio resources descriptor. Water resources/Networks split has been determined by comparison of the projects against their assigned business plan line which are Water Resources or Water Network + BPLs. The ledger outlines the closing allocation in WIP. The movement in WIP across price controls is determined by subtracting against the opening WIP balance by price control.

A final true up exercise is performed comparing the tangible capital expenditure additions to the tangible fixed asset additions. Differences arise between the two where a project has been assigned to a particular price control and capitalised in a cost centre which is not assigned to the same price control. The capital expenditure position is identified as the final position and differences are accounted for in WIP additions movement.

A final reconciliation is performed between the net book value of the tangible assets in the statutory accounts to the regulatory accounts, the only difference expected being capitalised interest.

2E Analysis of capital contributions and land sales – wholesale

Grants and contributions have been allocated between water and waste water in accordance with the nature of the income. Grants and contributions fully recognised in the income statement relate to IRE income. All other grants and contributions received are capitalised and amortised against depreciation.

Connection charges are contributions received from developers for service connection charges for installing a new service pipe and meter. (Water Industry Act s45).

Infrastructure charge receipts are contributions received in the year for new connections. This reflects a contribution to the costs of enhancing the local water or sewerage network. (Water Industry Act s146).

Requisitioned mains are contributions received from developers to requisition a new water main or sewer. (Water Industry Act s43, 55, 56 & 100).

Diversions are contributions received from local authorities, highway authorities and private companies to divert water mains or sewers. (Water Industry Act s185).

Other contributions are received from organisations towards the construction of specific capital projects, e.g. health authorities for fluoridation or government departments for environmental schemes.

Value of adopted assets is taken from our monthly adoptions reconciliation which represents postings to the ledger and are from the project manager in developer services.

Capitalised grants and contributions balance sheet

The opening value of capitalised grants and contributions (excluding adopted assets) has been brought forward as at 1 April. The total value of grants and contributions capitalised in the year agrees to the total value of grants and contributions recorded in the column 'capitalised and amortised against depreciation'. The total value of amortisation of the income assets agrees to the value released to the income statement in the year.

Proceeds from disposal of protected land

These are the net proceeds, after the deduction of all offsetting costs from disposals of protected land.

2F Household - revenues by customer type

The Target MI system reports on customer types. For regulatory accounting purposes, a different customer field (Property Usage Code (PUC)) is used to split revenues into customer types.

Properties categorised as voids (properties which have not received a water or waste water service during the year ending 2017-18) are excluded from the above customer categories, these make up an insignificant proportion of the total balance (less than 0.4%).

Customer numbers are provided from STW corporate source systems for all categories with the exception of line two (unmeasured waste water only) and line five (measured waste water only), which is provided by other water companies (OWCs), who bill on our behalf.

The customer numbers data has been subject to assurance in accordance with our Company Assurance Framework.

2G/H Non-household water and waste water - revenues by customer type

These tables are longer required following the disposal of our retail non-household activities to Water Plus in 2016.

2I Revenue analysis and wholesale control reconciliation

The wholesale/retail charges are determined as part of the Charges Submission process. Agreed tariffs are assigned a unique code which maps them to a customer type. Each code is mapped to a GL account and a cost centre. This enables the interface from Target to SAP so transactions can be posted into SAP.

All non-tariff general ledger income codes have been assigned to the below categories using guidance within the RAG 4 income categorisation table:

- Bulk supplies – water
- Bulk supplies – waste water
- Other third party revenue
- Other appointed revenue

2J Infrastructure network reinforcement costs

- A SAP business warehouse report produces a detailed view of infrastructure renewals expenditure and capital expenditure and income by project.
- Each project is assigned to a business plan line (BPL) which aligns to regulatory reporting and internal categories to allow reporting of capital expenditure against planned activity.
- Specific business plan lines relate to infrastructure network re-inforcement costs where the investment driver relates to managing supply demand balance specifically in relation to growth.
- Expenditure on low pressure improvements related to growth is included but expenditure on low pressure improvements related to enhanced service levels is excluded from the table.
- Expenditure on other non growth related supply demand balance projects are excluded e.g. hot weather action plans
- The projects in the infrastructure network re-inforcement BPLs are reviewed by a subject matter expert on completion of the table to ensure that expenditure has been correctly coded at source with adjustments made where required.

Water

- BPLs identified as water infrastructure network reinforcement growth lines are:
  - Network re-inforcement off-site capex - local reinforcements, hydraulic capacity (undersized assets) and strategic growth re-inforcements
  - On-site capex – new development and new connections expenditure

- A further categorisation of the expenditure is made into distribution and trunk mains and pumping and storage facilities where the former is all infrastructure expenditure and the latter is non-infrastructure. This categorisation is derived from the purpose mapping for each project which identifies if the spend is infrastructure (below ground) or non-infrastructure (above ground) related.

Waste

- Our existing Waste structure only has one network reinforcement growth BPL, therefore an analysis of projects to identify the on-site and off-site expenditure is conducted by a subject matter expert.
  - Network re-inforcement off-site capex - local reinforcements and strategic growth re-inforcements
  - On-site capex – requisitions and on-site adoptions expenditure

- A further categorisation of the expenditure is made into sewage collection (foul, combined and surface water only systems) and pumping and storage facilities where the former is all infrastructure expenditure and the latter is non-infrastructure. This categorisation is derived from the purpose mapping for each project which identifies if the spend is infrastructure (below ground) or non-infrastructure (above ground) related.

- Sewage collection expenditure is allocated 95% foul and combined systems and 5% surface water only systems. This is a management estimate based on analysis of projects which indicate that the majority of growth is as a result of foul flows and occasionally relate to upgrading the surface water systems.

7. Upstream services

The wholesale water operating and capital expenditure is allocated to upstream service once the business unit allocation is complete by applying the below approach:

(1) direct where appropriate;
(2) by identifying specific cost drivers by retrieving the relevant management information;
(3) management estimate where management information is not available;

Capital expenditure allocated to upstream services is at the same point as business unit allocation by business plan line and purpose code analysis or once business unit allocation has occurred (if business plan line and purpose code cannot determine this) by use of appropriate cost driver based on management information or management estimate.

The table definitions in RAG 4 are used to identify the boundary points and assets in each upstream service to aid cost allocation.

Upstream Services - Water

Business Unit	*Cost type*	*Upstream allocation*
Water resources	*Abstraction charges*	100% Abstraction licences
	All other costs	100% Raw water abstraction
Raw water distribution	Power	100% Raw water transport. Raw water storage uses negligible power
	Local authority rates	Allocated to raw water transport and raw water storage on the basis of the current cost gross book value of the assets attributed to each service.
	All other costs	100% Raw water transport
Water treatment		No disaggregation of water treatment to upstream services is required
Treated water distribution		No disaggregation of water treatment to upstream services is required

Water - Derivation of the quantities used to calculate the unit cost information

Licenced volume available - The total volumes available from Severn Trent licenced abstractions are recorded centrally in mega litres (Ml) in the 'Licence Budget' spreadsheet. The spreadsheet is based upon the invoices STW receive for all of our abstraction licences from the Environment Agency (EA) and Natural Resources Wales (NRW). The spreadsheet captures the abstraction cost along with the amount of water STW are licenced to abstract in any one year by area. The annual volume data is then reconciled with an internal database that holds all STW's abstraction licences.

Volume abstracted/transported - The total daily volume data from Operator readings and telemetry data is collected from all Severn Trent treatment sites outputs. These numbers are then totalled for all sites for the year, giving total abstractions. It is assumed that the total volume transported into the network is the same as the volume abstracted.

Average volume stored – The average volume stored is the average of the recorded daily stored volumes for the year.

Distribution input volume - Water distributed into supply is calculated monthly and is based on meter readings recorded from across the Severn Trent estate. It is assumed that the distribution input volume for water treatment and treated water distribution is the same.

Upstream Services - Wastewater

Business Unit	Cost type	Upstream allocation
Sewage collection	All cost types	Allocated on the basis of volume information collated during a 2017/18 project to raise visibility of sewerage charges for customers for a) foul water (including trade effluent), b) surface water draining from eligible premises and c) surface water draining from highways. Definitions of each category are as follows: Foul water is Dry Weather Flow (DWF) with trade effluent at Sewage Treatment Works (STW); Surface drainage are surfaces types associated with residential and commercial premises that drain to our systems, e.g. Paved (Non Road), Domestic Drives & Patios; Highway is any public road or other public way on land. It is used for major roads, but also includes other public roads and public tracks.
Sewage treatment	Chemical costs	Imported sludge liquor treatment allocation - based on the costs of the specific chemicals or management level at a site level
	Employments costs	Imported sludge liquor treatment allocation - an allowance has been made for this by estimating the costs for one site and applying to the number of dewatering centres.
	Rates	Imported sludge liquor treatment allocation - pro-rated on the proportion of sewage treatment load represented by liquor treatment activity.
Sludge	All cost types	Disaggregation between sludge transport, sludge treatment and sludge disposal occurs at the cost centre assignment stage in the accounting separation process applying the definitions in RAG 4, therefore no further disaggregation is required.

Waste water - derivation of the quantities used to calculate the unit cost information

Volume collected (foul, surface water drainage, highway drainage) – The reporting requirements for this line requires the calculation of collected volumes entering the sewerage system from foul connections (toilets, showers etc.), surface water drainage (roofs and paved areas appertaining to property) and highway drainage. This includes flow arriving at the sewage treatment works (measured using data from MCERT flow meters) plus unmeasured flow discharged to watercourses from surface water sewers and combined sewer overflow spills. Verified hydraulic sewer models are used to calculate the unmeasured (non-MCERT) flows to derive the additional collected volumes not included within the MCERT measured flows. This analysis is also used to calculate the split between foul, surface water drainage and highway drainage to take account of rainfall volumes during the reporting year.

Biochemical Oxygen Demand (BOD) (sewage treatment and disposal) - This figure is firstly taken directly from the reported BOD/d load figure from 'Table 4S - Non-financial data - sewage treatment – Wholesale', line 4S.7 - Total load received. The number is then multiplied by 365 (days) and divided by 1000 to give tonnes BOD/annum.

Biochemical Oxygen Demand (BOD) (sludge liquor treatment) - The starting point for the calculation is the reported total feed to digestion data which is extracted in tonnes of dry solids/annum by site (extracted from JRP loggers).

In order to calculate the amount of digestate, it is assumed that: 50% destruction of solids takes place across APD plants; and 36% across MAD plants.

Digested cake volume is calculated by dividing the digestate tds by the average % dry solids of cake sent to land from that site. Where digested sludge is sent to another site for dewatering, the %dry solids from the receiving site is used.

Liquor volume is calculated by subtracting the cake volume from the digester feed volume and adding 36% for polymer and washwater. BOD concentration is assumed to be 340mg/l (based on sampling of centrate from Barnhurst, Spernal, Roundhill, Strongford and Wanlip in 2016- 18). The following sites have liquor treatment plants (these are bioresources assets): Alfreton, Derby, Minworth, Newthorpe, Stoke Bardolph, Wanlip and Worksop.

BOD removal of 90% is assumed for these sites (based on sampling at Worksop LTP in 2015). Where digested sludge is sent to a site with an LTP for dewatering, the same % BOD removal has been assumed. The total BOD load from liquor for all sites is calculated as kg/annum. This figure is divided by 1,000 to give a value in tonnes.

Volume transported - sludge transport - The volume of sludge transported is the sum of the volume transported by tanker and the amount transported by pipeline.

To obtain the volume of sludge transported by tanker, the data set used to calculate line 4R.31 - Total measure of intersiting 'work' done by tanker is used. This identifies all of the tanker journeys from satellite sites to sludge treatment centres. Sludge discharged to the head of the works is not included.

To obtain the volume of sludge transported by pipeline, the data set used to calculate line 4R.30 - Total measure of intersiting 'work' done by pipeline is used.

The volume of sludge transported from Cannock to Four Ashes is assumed to be the same as the Four Ashes digester feed – this is obtained from the JRP loggers.

The volume of primary sludge transported from Coleshill to Minworth is not measured. An estimate of tds is obtained by multiplying the Coleshill population equivalent by 40 g/hd/day. The volume of sludge transported by this pipeline has been calculated by multiplying this value by 1.04% dry solids (measured value from October 2015).

The total volume transported by tanker and pipeline for Severn Trent is then calculated and produced in the summary tab of the "Data Return 2017 18 4E 25 calcs" spreadsheet.

Dried solid mass treated - sludge treatment – This figure is taken directly from the reported Total sewage sludge produced figure from Table '4R - Non-financial data - Wastewater network and sludge - Wholesale wastewater', line 4R.25.

Dried solid mass disposed - sludge disposal - This figure is taken directly from the reported Total sewage sludge disposed figure from Table '4R - Non-financial data - Wastewater network and sludge - Wholesale wastewater', line 4R.29.

8. General and support allocation methodology

General and support costs are identified in the ledger by cost centre. These are apportioned between water, waste and retail following the rules detailed in the table below.

For some central functions where the tasks do not specifically relate to water, waste or retail, costs are allocated based on a FTE allocation percentage.

Employee FTE percentages have been used for allocation of general and support costs for specific functions across price controls and for a number of shared cost centres whose activity straddles more than one price control.

In SAP, FTE's are assigned to individual cost centres. A SAP business warehouse report identifies the number of FTE's in each cost centre on a monthly basis. This captures the below employees:

- Direct – employees on the payroll, including fixed term contractors
- Indirect – employees hired via our recruitment agency partner as contractors/agency

The average number of FTE's over the 12 month period is calculated for each cost centre.

Where FTE costs have been capitalised, we have removed a proportion of FTEs to reflect the costs removed from operating expenditure. For costs identified as non-appointed, FTE's related to this activity have been removed based on the material costs associated with these activities.

Allocation of general and support expenditure between business areas.

Type of cost	*Basis of Allocation*	*Process*
Group Commercial – Stores	Stores Issues	Costs are allocated directly to water, waste water, and retail based on where stores issues that have been charged to a cost centre.
Group Commercial – Transport	Vehicle and plant recharges are downloaded from SAP. FTE	Transport is allocated directly to water, waste water and retail based on the internal vehicle and plant recharged throughout the year. Where the recharges have been posted against general and support business areas, the costs are allocated between water, waste water and retail using FTE.
Group Commercial – Procurement	Timesheets	Employees have estimated the proportion of their time spent in each price control and business unit via timesheets. Roles within Capital delivery and Commercial teams and Business Services team support specific contracts, such as Water Distribution, Water Treatment etc. An overall weighted average is calculated and applied to the overall Procurement costs that need to be allocated.
Group Commercial – Value Transformation & Support	Timesheets	The Commercial Support team consists of the Value Transformation and Performance & Governance teams: the former also complete

		timesheets, the latter support the main Procurement team so are allocated on the same basis.
Directors	Manpower – Timesheets Non manpower – Transactional Analysis (Management Information)	Manpower costs are allocated based on completion of time sheets splitting out time spent working in water, waste water and retail and relevant business units. A transactional analysis is carried out on non-manpower to allocate any costs directly to price controls/business units.
General Counsel	Price control FTE (including 3rd party contractors).	The costs are allocated on a basis of FTE (including 3rd party contractors) between water, waste water and retail.
Human Resources	Price control FTE (excluding 3rd party contractors).	The costs are allocated on a basis of FTE (excluding 3rd party contractors) between water, waste water and retail as the contractors do not utilise the services of the HR team.
Strategy & Regulation – Regulation	Manpower - A summary of costs are downloaded from SAP and split between manpower costs (1/9th Retail & 8/9th water & waste water allocation); and Non manpower – Transactional Analysis (Management Information)	Manpower costs are allocated on the basis of 1/9th to retail and remaining 8/9th are allocated to water and waste water based on a 50:50 split for each price control so as not to favour one wholesale price control over another. A transactional review is carried out for non-manpower costs to identify any costs that can be directly allocated to price controls. The balance is then also split 1/9th Retail and 8/9th water and waste water. Water and waste water are allocated equally to avoid bias between price controls.
Strategy & Regulation – Strategy	Manpower - A summary of costs are downloaded from SAP and split between manpower costs (1/9th Retail & 8/9th water & waste water allocation); and Non manpower – Transactional Analysis (Management Information)	Manpower costs are allocated on the basis of 1/9th to retail and remaining 8/9th are allocated to water and waste water based on a 50:50 split for each price control so as not to favour one wholesale price control over another. A transactional review is carried out for non-manpower costs to identify any costs that can be directly allocated to price controls. The balance is then also split 1/9th Retail and 8/9th water and waste water. Water and waste water are allocated equally to avoid bias between price controls.
Strategy & Regulation – Communications	Price control FTE (including 3rd party contractors). Non manpower – Transactional Analysis (Management Information)	Manpower costs are allocated on a basis of FTE (including 3rd party contractors) between water, waste water and retail. A transactional review of non-manpower is carried out on the transactions for items that relate specifically to water, waste water and retail; the remaining costs are allocated to price controls based on company FTE.

Finance, Assurance & Business Intelligence	Price control FTE (including 3rd party contractors).	The costs are allocated on a basis of FTE between water, waste water and retail.
Insurance	Price control FTE (including 3rd party contractors).	Direct insurance costs are allocated direct to price control. Remaining insurance costs are allocated on basis of FTE between water, waste water and retail.
Miscellaneous Reporting	Various allocation methods used depending on the cost to allocate between price controls unless there are any directly attributable costs in Miscellaneous Reporting which are removed from the G&S allocation.	Costs are allocated to price controls based on a line by line basis, depending on the nature of the costs and an assessment of the most appropriate cost driver. The material items are listed below: LTIP costs are allocated on the same basis as Directors; DB pension Admin costs/SAYE costs are allocated on the basis of FTE (excluding 3rd party contractors). Costs which are Finance related in nature e.g. FX and Leases are allocated on the basis of FTE (including 3rd party contractors) in line allocation of Finance G&S costs
Technology	Wholesale and Retail FTE (including 3rd party contractors).	As Severn Trent Water operates a hot-desking policy, it is considered that FTE is an appropriate driver to use as the allocation materially relates to number of computers. IS support costs are attributed to specific IS systems which are then allocated to business areas, wholesale, retail or general and support using FTE numbers. Wholesale is further allocated between Water and Waste water based on Wholesale FTE. IS costs which are across the whole business e.g. SAP costs are General and support IS costs are allocated across water, waste water and retail in proportion to the value of costs that are already assigned to these areas.
Property – Facility Managed (FM) sites	Occupation of FM sites is based on HR site occupation split by the Price Control business unit they work in or are allocated to.	SAP HR report with employee location and cost centre coding provides the data source. Costs are allocated based the occupation of the sites as a proxy for the floor space share, with the exception of the Monkspath site and Pride Park site.

		The Monkspath site contains IS servers and is allocated using the general and support IS allocations. The manpower costs is pro-rata allocated on the price control business unit cost of the combined FM and wholesale operational cost centres, whereas the central Opex FM costs is allocated based on the pro-rata proportional price control business unit cost of the FM sites only.
Property – Wholesale Operational sites & Compliance	Transactional spend analysis from SAP download reports and supporting invoice documentation.	A transactional analysis of the operational site costs cost centre is performed to identify spend by site and therefore the price control business unit.
Property – Portfolio Management	Allocated on the Property estate portfolio numbers by price control / business unit. SAP Reports are downloaded for Portfolio Manager Cost centres cost.	Allocate the portfolio management cost by the price control business number of properties. This is after recharging the cost of collecting and managing rental income
Property Visitor Experience Team (VET) sites	Allocate the VET costs based on the work undertaken by the Rangers (Manpower) and the costs incurred in catchment management of the reservoir sites and the management of public access visiting the site.	SAP reports are downloaded for Portfolio Manager Cost centres cost.
Property Services Manager	Allocated pro-rata against the weighted average price control allocation of all other cost centres (above).	SAP report of Cost centre spend and price control allocation of above property services allocation.
Property - Facility Management (FM) Sites	The spend is allocated based on the weighted average allocation of "Wholesale sites" (Ops) and FM sites)	These costs relate to the central operational management of running both FM & operational sites. SAP reports are downloaded for FM Cost centre cost.

An allocation of the above support costs is made to retail non-household to cover the retail developer services administration activities.

A summary of the G&S allocation by support function is outlined below:

Support area	*Water resources*	*Water Network +*	*Waste Network +*	*Sludge*	*Retail household*	*Retail non household*	*Total appointed*
Group commercial (including Transformation)	0.8%	50.0%	39.6%	7.0%	1.1%	1.5%	100.0%
Transport	2.2%	16.0%	42.6%	28.4%	8.3%	2.5%	100.0%
Directors	13.9%	43.1%	30.8%	12.2%	0.0%	0.0%	100.0%
General counsel	5.2%	35.5%	30.8%	10.4%	16.0%	2.1%	100.0%
Human resources	7.7%	50.5%	31.9%	9.9%	0.0%	0.0%	100.0%
Strategy & regulation (incl. Communications)	11.0%	37.1%	32.9%	15.4%	3.2%	0.4%	100.0%
Finance, Assurance & BI (incl. Insurance & Misc. Reporting)	10.4%	35.8%	30.9%	11.7%	9.9%	1.3%	100.0%
Information Systems	4.6%	31.1%	28.5%	9.6%	25.1%	1.1%	100.0%
Property	13.5%	28.2%	44.8%	2.1%	11.2%	0.2%	100.0%

9. Capital expenditure process

Capital investment framework (CIF)

The company's capital investment framework (CIF) manages large capital programmes. Capital projects go through a formal approval process as follows:

Owner(s)	*Process / activity*
Project Manager	Submit a business case template (project/ application) outlining the operating and capital expenditure.
Programme Board	Discuss and review project with the Finance Analyst teams.
Investment Governance Analyst	Scrutinise project applications and assess whether operating costs and capital expenditure have been allocated correctly. In the event that they disagree with the proposed accounting treatment the project manager is advised accordingly. In certain circumstances, the guidance issued by the Analyst Team may be contested by the project team. In such cases the proposal is referred to Group Finance who after referring to the appropriate International Financial Reporting Standard or Regulatory Accounting Guidance, provide a defining judgement on the issue.
Group Finance	Issue a guidance note to aid business users in the preparation of their capital investment proposals. This tends to occur for more complex areas where the applicable accounting principles, as defined in the capital expenditure accounting policy, are less easily understood by non-finance professionals.

Labour, pensions and overhead absorption rates ("Burdening")

This is a process that enables the recovery of costs from departments (primarily Support) whose activities are indirectly linked to the capital programme. The burdening process calculates these costs and allocates them to capital accordingly.

The overhead burden rate is calculated as follows:

Total allowable staff and support function costs to be recovered divided by the gross annual investment programme expressed as a percentage.

The burden rate is refreshed at half year and then finalised at the year end.

WONDERFUL ON TAP

SEVERN TRENT