

Hafren Dyfrdwy Cyfyngedig

Accounting Separation Methodology Statement

Year ended 31 March 2019

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Hafren Dyfrdwy Accounting Separation Methodology Statement

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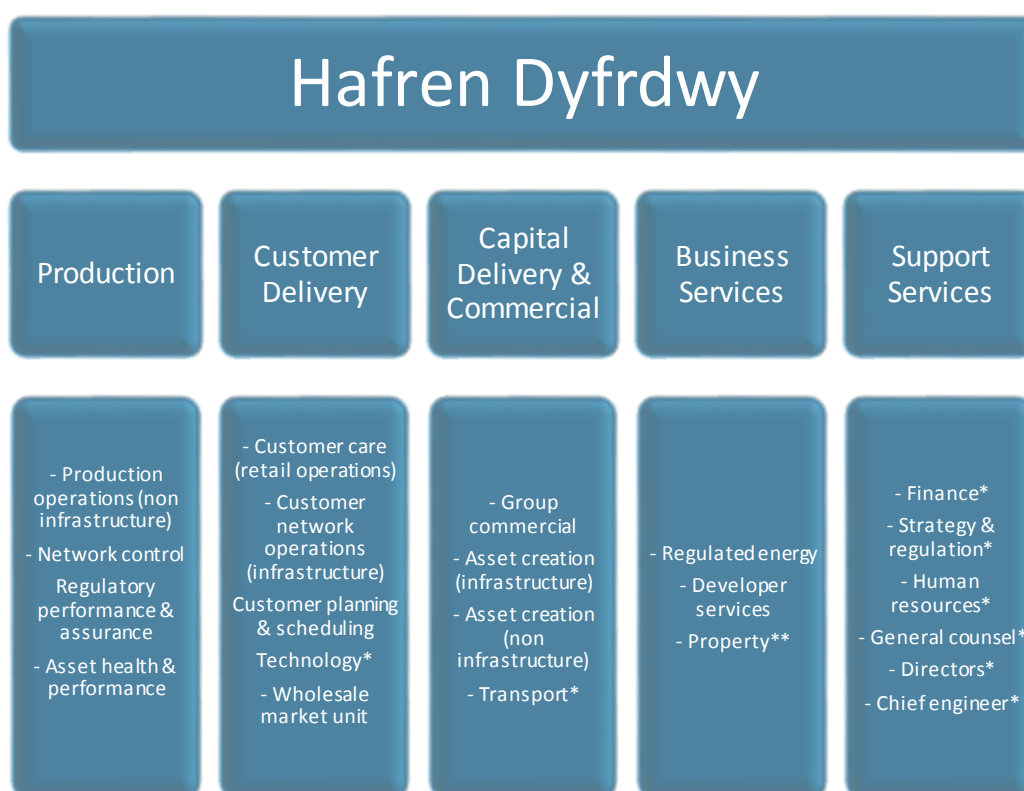
Introduction

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 (www.hdcymru.co.uk).

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

The operating business structure at Hafren Dyfrdwy (HD) is as follows:



* General and support services provided by Severn Trent Water, recharged via the intercompany process

** Direct general and support services and recharged services

Systems in place

Information used to populate the tables originates from our SAP system which 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. Areas of responsibilities

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

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.

<i>Principle</i>	<i>OFWAT requires that...</i>	<i>At Hafren Dyfrdwy...</i>
<i>Transparency</i>	The cost attribution and allocation methods applied to allocate costs within the APR need to be transparent. This means that the costs and revenues apportioned to each service or segment should be clearly identifiable. The cost and revenue drivers used within the system should be clearly explained to enable robust assurance against this guidance.	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.
<i>Causality</i>	Cost causality requires that costs (and revenues) are attributed or allocated to those activities and services that cause the cost (or revenue) to be incurred. This requires that the attribution or allocation 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.
<i>Non-discrimination</i>	The attribution or allocation of costs and revenues should not favour any price control unit or appointed/non-appointed business 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.
<i>Objectivity</i>	The cost and revenue attribution criteria need to be objective and should not intend to benefit any price control unit or appointed/non-appointed business. Cost allocation must be fair, reasonable and consistent.	Cost allocation bases are as objective as possible and are not designed to favour any price controls or associated companies.
<i>Consistency</i>	Costs should be allocated consistently 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.
<i>No cross subsidy between price controls</i>	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.'
<i>Principal use</i>	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 other 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.

4. Recharges to/from associated companies

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

In 2018/19 Hafren Dyfrdwy did not provide any support services to associated companies, however did receive recharges of support services from Severn Trent Water.

The recharge process undertaken by Severn Trent Water is outlined below.

The recharges include both ad-hoc costs and recurring charges. Ad-hoc or one off expenses are recharged via an intercompany process usually within the month they are incurred. For recurring charges there is an established management recharge process which is undertaken on a quarterly basis to transfer 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.

Where management and general (M&G) assets are utilised in the provision of the service, a use of asset recharge is separately calculated and recharged.

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 associates has been completed.

A summary of the recharges can be found in the supplementary disclosures within the Annual Performance Report.

Integration of Hafren Dyfrdwy operational activities into SAP

In the current year, following the alignment of the England and Wales boundaries between Severn Trent and Hafren Dyfrdwy, the SAP system was configured to allow recharge of operational activities between the two companies.

Severn Trent Water records the costs for operational activities undertaken in Powys and recharges to Hafren Dyfrdwy and Hafren Dyfrdwy records the costs for operational activities undertaken in Chester and recharges to Severn Trent Water.

The recharge takes place using the SAP Work Force Management (WFM) functionality and planning and scheduling systems. The work order is booked to Severn Trent Water or Hafren Dyfrdwy based on the functional location (FLOC) of the asset. If the asset has a Hafren Dyfrdwy FLOC then an appropriate Hafren Dyfrdwy cost centre will incur the costs for the job.

Costs will recharge automatically from Severn Trent to Hafren Dyfrdwy through time booked to work orders, at a rate calculated to include direct and indirect manpower and non-manpower costs (fuel, vehicle and PPE). The rate is reviewed annually by the Customer Network Operations Finance Team and is updated in WFM.

Any other costs booked to a work order not included in the rate (e.g. materials) will also follow the work order and move between Severn Trent Water and Hafren Dyfrdwy automatically.

5. Operating costs 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 and 4F). Cost centre financials and cost driver price control allocation percentages are held in the model, allowing calculation of costs at a price control and business unit level.

Inputs into the accounting 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 and internal assurance providers to confirm the cost allocation principles comply with the regulatory requirements.

First stage review applies to all inputs, second and third line review is on a sample basis based on risk factors.

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

The operating costs accounting separation process is further detailed below:

Owner(s)	Process / activity
<i>Finance business partners – Production, Customer Delivery, Business Services, Capital Delivery & Commercial</i>	PRICE CONTROL AND BUSINESS UNIT/ACTIVITY ASSIGNMENT
	Identify 'direct' cost centres for each respective area and assign to business units within price controls.
	Identify 'shared' 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 and 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.
<i>Finance business partners – Production, Customer Delivery, Business Services, Capital Delivery & Commercial</i>	Perform year end cost allocation calculations following the process outlined in each PDT to determine the year end allocation percentage.
	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.
	Perform year end calculations and review calculations performed by Management Accounting on their behalf.
<i>Management Accounting</i>	APPLICATION OF ALLOCATIONS TO YEAR END FINANCIAL VALUES
	Assign cost centre and cost driver information in the PDTs to the applicable costs centres and cost groupings in the model.
	Adjust the total costs to account for items which are not captured in the report e.g. revenue reclassifications and exceptional items.
	Perform year end cost allocation calculations for specific PDTs.
<i>Management Accounting</i>	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.
<i>Management Accounting</i>	RECONCILIATION
	A reconciliation is performed to ensure 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.
<i>Finance business partner leads and senior finance managers for respective table owners Regulatory Accounting team Strategy & Regulation team</i>	REVIEW PROCESS

6. 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 changes in direct attribution or allocation

Following acquisition of the company by Severn Trent Water in February 2017, the England and Wales boundaries were aligned to the licence variations effective 1 July 2018 resulting in Hafren Dyfrdwy becoming a waste water provider from this date. In order to ensure that costs incurred in the first quarter of the year were only allocated across water and retail price controls, the cost allocation process outlined above was completed at the end of the first quarter of the year. At the end of 2018/19 a further cost allocation process was completed for the remaining period whereby costs were allocated between water, waste water and retail. The results for the two processes were summed to produce the segmental reporting financial tables in section 2 and 4 of the APR.

Enhanced management information to enable direct allocation or aid cost allocation

Water power costs

This year the average pumping heads have been calculated for numerous sites with test data. Historically only the rated head of the pump were used. The Severn Trent Water calculation uses a comprehensive suite of test data and it was our commitment to improve the accuracy of the Hafren Dyfrdwy calculation by aligning the methodology to match that of Severn Trent Water.

7. Wholesale variance analysis to the prior year

Wholesale Water

Opex analysis

<i>Operating expenditure</i>	<i>Current year figures (£m)</i>	<i>Prior year figures (£m)</i>	<i>Variance (£m)</i>	<i>Variance (%)</i>	<i>Commentary</i>
Water Resources					
<i>Power</i>	(0.235)	(1.017)	0.782	76.9%	Power costs include Powys water sites and exclude Chester sites compared to the previous year. Lower impact of unit price changes against prior year due to switch to lower Severn Trent Water tariffs. Water business unit allocation has changed due to alignment of the average pumping head calculation with Severn Trent Water methodology.
<i>Abstraction charges/ discharge consents</i>	(0.603)	(0.828)	0.225	27.2%	Decrease due to transfer of water resource assets and related abstraction licences to Severn Trent Water.
<i>Bulk supply</i>	(0.239)	0.000	(0.239)	100.0%	Increased bulk supply activities to Severn Trent Water due to boundary alignment.
<i>Other operating expenditure - excluding renewals</i>	(0.665)	(0.194)	(0.471)	-242.8%	Increased property compliance and management activities (including impact of transfer of Vrynwy and Clywedog assets).
<i>Local authority and Cumulo rates</i>	(0.264)	(0.034)	(0.230)	-676.5%	Underlying increase in total rates relating to CPI uplift and transfers of assets between Severn Trent Water and Hafren Dyfrdwy which have then been allocated based on revised GMEAV of assets.
Raw Water Distribution					
<i>Power</i>	(0.523)	(0.100)	(0.423)	-423.0%	See variance explanation in Water Resources.
<i>Bulk supply</i>	(0.119)	0.000	(0.119)	100.0%	Increased bulk supply activities to Severn Trent Water due to boundary alignment.
<i>Local authority and cumulo rates</i>	(0.194)	(0.421)	0.227	53.9%	Underlying increase in total rates relating to CPI uplift and transfers of assets between Severn Trent Water and Hafren Dyfrdwy which have then been allocated based on revised GMEAV of assets.

Water Treatment					
<i>Power</i>	(0.132)	(0.268)	0.136	50.7%	See variance explanation in Water Resources. In addition, the closure of the Legacy water treatment works has reduced consumption.
<i>Renewals expensed in year (non-infrastructure)</i>	(0.430)	0.000	(0.430)	100.0%	Increased bulk supply activities to Severn Trent Water due to boundary alignment.
<i>Local authority and cumulo rates</i>	(0.126)	(0.237)	0.111	46.8%	Underlying increase in total rates relating to CPI uplift and transfers of assets between Severn Trent Water and Hafren Dyfrdwy which have then been allocated based on revised GMEAV of assets.
Treated Water Distribution					
<i>Power</i>	(1.316)	(1.058)	(0.258)	-24.4%	See variance explanation in Water Resources. In addition, the closure of the Legacy water treatment works has resulted in additional power consumption relating to recirculation pumps and high lift pumps.
<i>Bulk supply</i>	(1.406)	0.000	(1.406)	100.0%	Increased bulk supply activities to Severn Trent Water due to boundary alignment.
<i>Other operating expenditure - renewals expensed in year (Infrastructure)</i>	(3.778)	(0.786)	(2.992)	-380.7%	IRE processes aligned with STW with costs identified at source including accounting policy alignment (previously recorded as capex).
<i>Other operating expenditure - excluding renewals</i>	(3.622)	(2.629)	(0.993)	-37.8%	Increase due to outsourced leakage gang activity and increased operating costs due to hot weather incident activities over the summer and operational recovery activities in the second half of the year.
<i>Local authority and Cumulo rates</i>	(0.721)	(0.866)	0.145	16.7%	Underlying increase in total rates relating to CPI uplift and transfers of assets between Severn Trent Water and Hafren Dyfrdwy which have then been allocated based on revised GMEAV of assets.

Atypical expenditure

On 25 October 2018 the High Court issued a judgment in the Lloyds Bank case in relation to gender equality in Guaranteed Minimum Pension rights that has an impact on the Group's defined benefit pension liabilities. We have obtained independent advice from the Group's actuaries to determine the amount of the additional liability and have made provision for our best estimate in this year's financial statements.

This has been allocated to water and retail only pro-rated on FTE. The charge allocated to water of £0.361m has been allocated to water resources (£0.040m), raw water distribution (£0.010m), water treatment (£0.205m) and treated water distribution (£0.106m).

There was no atypical expenditure in the prior year.

Capex analysis

Overall the Water net Capex investment in 2018/19 was £11.0m (excluding atypicals). This is £3.5m (-24.1%) lower than the net investment in 2017/18 and is in line with our delivery programme which reflects investment to support delivery of our performance commitments and statutory requirements. The significant variances by business unit are explained below:

<i>Business unit</i>	<i>Current year figures (£m)</i>	<i>Prior year figures (£m)</i>	<i>Variance (£m)</i>	<i>Variance (%)</i>	<i>Commentary</i>
Water Resources	0.276	0.996	(0.720)	-72.3%	-
Raw Water Distribution	0.018	0.069	(0.051)	-73.9%	-
Water Treatment	5.614	9.788	(4.174)	-42.6%	Year on year reduction in line with expectations due to completion of large capital projects in the prior year.
Treated Water Distribution	5.054	3.583	1.471	41.1%	-
Total	10.962	14.436	(3.474)	-24.1%	

Wholesale Waste Water

Opex analysis

Overall the waste water total operating expenditure in 2018/19 was £2.6m. There was no waste water operating expenditure in 2017/18, as Hafren Dyfrdwy did not previously have any waste water operations until 1 July 2018 when the England and Wales borders were aligned between Severn Trent Water and Hafren Dyfrdwy.

There was no atypical expenditure in the current or prior year.

Capex analysis

Overall the waste water net Capex investment in 2018/19 was £0.3m (excluding atypicals). This is in line with our delivery programme which reflects investment to support delivery of our performance commitments and statutory requirements.

<i>Business unit</i>	<i>Current year figures (£m)</i>	<i>Prior year figures (£m)</i>	<i>Variance (£m)</i>	<i>Variance (%)</i>	<i>Commentary</i>
Sewage Collection	0.136	0.0	0.136	100.0%	No waste water activities provided prior to the licence variation.
Sewage Treatment	0.161	0.0	0.161	100.0%	No waste water activities provided prior to the licence variation.
Sludge	0.0	0.0	0.0	100.0%	No waste water activities provided prior to the licence variation.
	0.297	0.0	0.297	100.0%	

Capex atypical expenditure

Following the England and Wales boundary alignment on 1 July 2018, assets with a net book value of £107.269m (in the Powys area) were transferred from Severn Trent Water Limited to Hafren Dyfrdwy Cyfyngedig during the year.

8. Retail variance analysis to the prior year

Retail household

Retail household total operating costs of £2.830m are £0.626m (28.4%) higher than the prior year. An analysis of significant variances is outlined below:

<i>Business unit</i>	<i>Current year figures (£m)</i>	<i>Prior year figures (£m)</i>	<i>Variance (£m)</i>	<i>Variance (%)</i>	<i>Commentary</i>
<i>Customer services</i>	(0.671)	(0.446)	(0.225)	-50.4%	The increase is driven by billing & payment handling due to the customer mix change from DV to HD and an offset within debt management due to updated call volume data being available; slightly offset by a decrease in investigatory / first visits to customers due to aligning to ST policies
<i>Debt management</i>	(0.230)	(0.310)	0.080	25.8%	Offset within payment handling due to updated call volume data being available
<i>Depreciation and amortisation</i>	(0.495)	(0.137)	(0.358)	-261.3%	Increase due to system upgrades as part of migration activities
<i>Atypical expenditure</i>	(0.035)	0.000	(0.035)	100.0%	Retail household share of Guaranteed Minimum Pension (GMP) equalisation costs

Retail non-household

Retail non-household total operating costs of £0.419m are £0.115m (37.8%) higher than the prior year. An analysis of significant variances is outlined below:

<i>Business unit</i>	<i>Current year figures (£m)</i>	<i>Prior year figures (£m)</i>	<i>Variance (£m)</i>	<i>Variance (%)</i>	<i>Commentary</i>
<i>Customer services</i>	(0.036)	(0.024)	(0.012)	-50.0%	The increase is driven by payment handling & non-network enquiries due to customer mix change from DV to HD; slightly offset by a decrease in investigatory / first visits to customers due to aligning to ST policies
<i>Debt management</i>	(0.023)	(0.009)	(0.014)	-155.6%	Small decrease year on year due to customer mix change from DV to HD
<i>Depreciation and amortisation</i>	(0.081)	0.000	(0.081)	100.0%	Increase due to system upgrades as part of migration activities
<i>Atypical expenditure</i>	(0.003)	0.000	(0.003)	100.0%	Retail non household share of Guaranteed Minimum Pension (GMP) equalisation costs

9. 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 (Q1 CIS billing system, Q2-4 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. 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	System report using data in main billing system (Target).	A system report is run which identifies the value and the volume of SWD rebates issued for the required period.

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:

<i>Price control</i>	<i>Business unit</i>
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.

Business unit allocations are explained below:

Operating Expenditure - water and waste water

<i>Operating expenditure</i>	<i>Expense type</i>	<i>Price control</i>	<i>Business unit allocation</i>
Power	Power	Water	Average pumping head allocation based on non-financial data in Table 4P. The average pumping head calculation methodology outlined in RAG 2 is applied and the reservoir classification outlined in RAG 4 is applied to arrive at water resources and water network+ allocation.
		Waste water	Direct assignment to cost centre which is assigned to business unit based on their activities.
	Shared Carbon Reduction Commitment payments	Water and waste water	Allocated based on direct costs of power charged to water and waste water.
Income treated as negative operating expenditure	Hydro feed-in tariff income	Water	Water - 100% water resources (hydro generation).
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	Treated water supplies	Water	Pro-rated based on the associated company prior year Table 4D APR splits between water resources & water network +.
	Bulk waste water supplies	Waste water	Pro-rated based on the associated company prior year Table 4E APR splits between waste network + and sludge.
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	<ul style="list-style-type: none"> • Employment costs • 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	<p>Directly allocated to business units by the use of cost centres which are assigned to business units.</p> <p>Where other costs relate to more than one business unit they are allocated between the business units by:</p> <ul style="list-style-type: none"> • identifying specific cost drivers by retrieving the relevant management information; • management estimate where management information is not available; or • allocation of management and supervisory costs in line with allocation methodology of direct teams • appropriate FTE cost driver depending on the operational area the costs are supporting
Local authority rates	This includes both local authority rates and cumulo rates.	Water (cumulo)	Pro rata to the gross MEAV value of infrastructure and non-

			infrastructure assets assigned to each water business unit.
		Waste water	Based on non-infrastructure gross MEAV of waste water assets into Sewage treatment.
		Water and waste water (office buildings)	Floor space occupied.
Third party services	Fire hydrants	Water	Treated water distribution
	Bulk water supplied		Water resources (non-potable) and Water Network + (potable) in line with revenue charging methodology
	Hydro dams and reservoir management		Water resources
	Bulk waste water supplies	Waste water	Waste network + and Sludge costs calculated in line with revenue charging methodology

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 11.

Capital expenditure

- The Hafren Dyfrdwy capital expenditure data by project uses two data sources; the legacy data is on an excel document and all projects have been moved in to SAP Business Warehouse from 1st July 2018.
- The SAP Business Warehouse report produces a detailed report of renewals expenditure and capital expenditure and income by business plan line (BPL). Each BPL consists of a series of individual projects, with a total of c. 200 projects over the capital programme.
- The capital expenditure projects in the excel document have been recorded line by line for 2018/19. This has been analysed on a project by project basis against the business unit activities and related assets outlined in RAG 4. Each project is been assigned a business plan line (BPL) to allow regulatory categorisation.
- 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:

<i>Regulatory driver</i>	<i>Table line</i>	<i>Infrastructure/non-infrastructure allocation</i>
Infrastructure renewals expenditure (IRE)	4D.5	100% infrastructure
Maintenance non-infrastructure (MNI)	4D.13	100% non-infrastructure
Enhance levels of service Quality Supply/demand balance	4D.14-15	Infrastructure/non-infrastructure allocation at project level (above ground/below ground categorisation)

- 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. This process has been manually reviewed for the Quarter 1 projects, in excel.
- 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 is 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:

<i>Capex spend</i>	<i>Price control/business unit allocation</i>
<i>IT projects – retail IT spend</i>	Allocated entirely to retail.
<i>IT projects – wholesale IT spend</i>	Based on management estimate.
<i>Property projects</i>	Based on the nature of spend, the area of the business it benefits and the property/site it relates to.

Cash Expenditure

Cash expenditure items have been allocated as below:

<i>Cash expenditure</i>	<i>Price control allocation</i>	<i>Business Unit allocation</i>
<i>Pension deficit recovery payments</i>	Pro-rate cost against the number of employees in each price control who are members of the scheme.	Direct net employment costs at business unit level.

2C Operating cost analysis – Retail

Where cost centres do not have teams aligning to discrete 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.

Retail recharges 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 timesheets completed by the technicians. The costs relating to these jobs are transferred to retail within the Customer Services activity.

Customer Side Leaks – The activities in relation to fixing customer side leaks are undertaken by the wholesale water teams, these are identifiable via timesheets. 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 and is recorded in Other operating expenditure. Please refer to section 11 for the general and support allocation methodology.

Team responsibilities and allocation to activities

<i>Business Area</i>	<i>Team(s) / activity</i>	<i>Retail activity types</i>	<i>Cost allocation/driver</i>
Metering Services	Costs relating to planning, scheduling and execution of meter reads. Predominantly people costs + costs of fuel, lease vehicles for meter readers.	Meter Reading	100% allocation
Credit Management	People + third party costs relating to chasing debt and litigation (court costs).	Debt management	100% allocation
	The bad debt charges sits within this cost centre.	Doubtful debt expense	100% allocation
Customer Contact	Costs predominantly relate to people costs of call centre agents and team leaders in relation to frontline Customer Service operational call centres and to Customer Contact and Credit Management.		<p>The costs within the Customer Contact centre need to be first split based on the activities the individuals in the cost centres are undertaking.</p> <p>Specific individuals focus on debt collection and the remainder focus on a mixture of billing and payment handling and other queries. The costs attributed to the proportion of people focusing on debt is directly allocated to debt management retail activity. The remaining individuals are then split on the basis of customer contact volume.</p> <p>The customer contact volume report is provided by the operational team and breaks down all contacts by reason. Once all reasons have been assigned to a retail activity, a sum of the number of contacts for each retail activity is performed and shown as a % of the total volume of contacts.</p>

Allocation to Household/Non-household

<i>Business Area</i>	<i>Basis of allocation</i>	<i>Process</i>
Billing	Number of bills raised	Split is determined using the bill volumes sent to household and non-household customers.
Payment handling, remittance and cash handling	Number of payments received from each group of customers	The costs associated with the total number of payments by each account type split by household and non-household.
Vulnerable customer services	Direct allocation	100% to household
Non-network customer enquiries and complaints	Number of household and non-household customer complaints	Pro-rated to household and non-household
Network customer enquiries and complaints	Number of household and non-household customer complaints	Pro-rated to household and non-household
Network customer enquiries and complaints (Investigatory visits).	Direct costs of household and non-household jobs	Investigatory visits / first visit to the customer costs are recharged from wholesale. Retail household and non-household category and related costs are captured through work orders.
Other direct costs	Number of household and non-household customers	Pro-rated to household and non-household
Debt management	The household and non-household proportion is based on debt write-off	Debt management costs are split using the value of aged debt over 1 year
Doubtful debts	Split of bad debt charge	Split of bad debt charge based on proportion of revenue
Meter reading	Number of meter reads	The costs are allocated between household and non-household based on the number of reads
Services to developers	Direct allocation	100% to non-household
Customer side leaks	Direct costs of household and non-household jobs	The costs of the initial visit and follow up visit including repair costs along with the associated FTE are recharged to retail. Retail household and non-household category and related costs are captured through work orders.

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 historical 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:

- Infrastructure/non-infrastructure 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 reclassified 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

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.

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. The price control assignment is determined from the site the accrual relates to.

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 projects have been recorded line by line in an excel document for 2018/19. This has been analysed on a project by project basis against the business unit activities and related assets outlined in RAG 4.

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 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 CIS billing system holds all customer data (pre migration) and the reporting system holds specific reports which are used to split the revenue into customer types for the first quarter. Following this the Target MI billing system holds all customer data (post migration). For regulatory accounting purposes, a different customer field (Property Usage Code (PUC)) is used to split revenues into customer types.

Properties categorised as voids are excluded from billing and will not form part of the overall customer categorisation. The overall proportion of voids will amount to an insignificant proportion of total customers. Number of households billed is fully provided from the corporate source systems for all categories and will be for Water only.

Customer numbers are provided from the Target billing system 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.

Data for quarter 1 and quarters 2 to 4 are combined together to get the full year results and reconciled to full year revenue in the statutory postings.

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

For the first quarter reports for large user and non-standard water customers (pre migration) are taken from the CIS system to give property numbers, meter size and volume usage for those customers. All remaining customers are broken down by meter size.

For the large users and non-standard water customers both their standing charge and their volumetric charge are calculated by multiplying either the property count, or the volume count respectively, by their appropriate charge for each tariff (linked to meter size). The wholesale/retail split for these charges are obtained by taking the relevant value for wholesale and retail from each tariff for each particular component.

For all other users their standing charges are calculated by taking property counts for each meter size and multiplying it by the standing charge for the appropriate tariff. The wholesale/retail split for the standing charges is obtained by taking the relevant value for wholesale and retail from each tariff for this particular component. Their volumetric charge is then the remaining value of measured revenue remaining once large user charges (standing and volumetric), non-standard user charges (standing and volumetric) and other users (standing charges only) have been deducted. The wholesale/retail split for this remaining charge is obtained by taking the average of the wholesale/retail split for the 50MI tariff for both Chester and Wrexham and applying this split.

All unmeasured charges are split based on property numbers within Chester and Wrexham with the appropriate tariffs applied to each charge element.

The revenue calculated for each service is then checked against the following:

- Management Accounts reported revenue – this is to ensure that before taking into account any movements for the Regulated reported revenue the revenue calculated was accurate
- Table 2I – to ensure reported revenue is aligned appropriately for each service component.

For quarters 2 to 4 reports for large user and non-standard water customers (post migration) are taken from the Target MI system to give property numbers, wholesale and retail revenue, and volume usage for those customers broken down into the relevant revenue types (water/waste water). This billing data is then combined with the unbilled revenue accrual, which itself is broken down into wholesale/retail, water/waste water and property volumetric usage to calculate the total revenue (split wholesale and retail) at each tariff banding level.

Data for quarter 1 and quarters 2 to 4 are combined together to get the full year results and reconciled to full year revenue in the statutory postings.

2I Revenue analysis and wholesale control reconciliation

The wholesale/retail charges are determined as part of the Charges Submission process. The agreed tariffs entered into Target by assigning each tariff to unique codes which identifies whether the tariff relates to (1) water or waste, (2) measured or unmeasured, (3) wholesale or retail charge, (4) household or non-household. Each code is interfaced to a GL account and profit centre in SAP based on the above categories.

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

Data for quarter 1 and quarters 2 to 4 are combined together to get the full year results and reconciled to full year revenue in the statutory postings.

2J Infrastructure network reinforcement costs

- The Hafren Dyfrdwy data capital expenditure data by project is located in 2 different sources; the legacy data is on an excel document and all projects have been moved in to SAP Business Warehouse from 1st July 2018.
- 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. The legacy projects are also assigned BPLs based on project activity.
- Specific business plan lines relate to infrastructure network re-inforcement costs where the investment driver relates to managing supply demand balances 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.

2K Infrastructure charges reconciliation

The majority of the lines of the data is populated from other tables (table 2E and 2J).

Section A - Impact of infrastructure charge discounts

- Net infrastructure charge income is populated from table 2E.
- A SAP business warehouse report is run to find the value of infrastructure discount given on invoice. Any infrastructure charge refunds that have not been processed through SAP are added to the value to get total discount given.

Section B - Comparison of revenue and costs

- Table 2K is a new requirement therefore there is no variance brought forward from prior year.
- The infrastructure charges revenue value is populated from gross revenue in section A of the table.
- The costs are populated from table 2J.

10. 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

<i>Business Unit</i>	<i>Cost type</i>	<i>Upstream allocation</i>
<i>Water resources (abstraction licences, raw water abstraction)</i>	<i>Abstraction charges</i>	100% Abstraction licences
	<i>All other costs</i>	100% Raw water abstraction
<i>Raw water distribution (raw water transport, raw water storage)</i>	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
<i>Water treatment</i>		No disaggregation of water treatment to upstream services is required
<i>Treated water distribution</i>		No disaggregation of water treatment to upstream services is required

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

Licensed volume available

The total volumes available from Hafren Dyfrdwy licenced abstractions are recorded centrally in mega litres (Ml) in the 'Licence Budget' spreadsheet. The spreadsheet is based upon the invoices Hafren Dyfrdwy 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 Hafren Dyfrdwy is licenced to abstract in any one year by area. The annual volume data is then reconciled with an internal database that holds all abstraction licences.

Volume abstracted/transported

The total daily volume data from Operator readings and telemetry data is collected from all Hafren Dyfrdwy treatment sites outputs. These numbers are then totalled for all sites for the year to give us our abstracted and

transported data. The abstraction figure includes all water that we abstract under our own licences. This then forms the basis of the water volume transported, but any raw water we purchase from or sell to other water companies is then added in.

Average volume stored

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

Distribution input volume (Water treatment)

Water distributed into supply is calculated monthly and is based on meter readings recorded from across the estate (including exports).

Distribution input volume (Treated water distribution)

Total treated water put into the distribution network is calculated monthly and is based on meter readings recorded from across the estate (includes bulk imports from other companies and excludes bulk exports).

Water population

The population is derived from billed properties numbers and estimation of occupancy derived from third party data and also includes small estimate for transient population (students, migrants).

Upstream Services – Waste water

Business Unit	Cost type	Upstream allocation
<i>Sewage collection (Foul, surface water drainage, highway drainage)</i>	All cost types	<p>Allocated on the basis of volume information collated during a 2018/19 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.</p> <p>Definitions of each category are as follows:</p> <p>Foul water is Dry Weather Flow (DWF) with trade effluent at Sewage Treatment Works (STW);</p> <p>Surface drainage are surfaces types associated with residential and commercial premises that drain to our systems, e.g. Paved (Non Road), Domestic Drives & Patios;</p> <p>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.</p>
<i>Sewage treatment (Sewage treatment and imported sludge liquor treatment)</i>	All cost types	Not required.
<i>Sludge (Sludge transport, sludge treatment, sludge disposal)</i>	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)

There are no volumes relating to sludge liquor treatment as Hafren Dyfrdwy do not have any imported liquors returned to them for processing.

Volume transported (sludge transport)

The volume of sludge transported is the sum of the volume transported by tanker and the amount transported by pipeline (nil return for sludge pipelines as there are no sludge pipelines in Wales).

To obtain the volume of sludge transported by tanker, the data set used to calculate line 4R.32 - Total measure of inter-siting '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.

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)

All sludge in HD is transported as a liquid. The data set used to calculate line 4R.32 - Total measure of inter-siting '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.

Waste water population

This value is calculated from the ONS CACI populations by postcode which are summed for each works catchment and then minor adjustments are made to allow for non-counted populations and small catchments.

11. 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, these have been excluded 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.

The FTE numbers are grossed up for the number of wholesale/retail direct operations and operations support FTEs which are recharged from Severn Trent Water. This ensures that the support costs are being allocated to the areas utilising the costs.

Allocation of general and support expenditure between business areas.

<i>Type of cost</i>	<i>Basis of Allocation</i>	<i>Process</i>
<i>Finance</i>	FTE	FTE allocation process as above.
<i>HR</i>	FTE	FTE allocation process as above.
<i>General Counsel</i>	FTE	FTE allocation process as above.
<i>Strategy & Regulation</i>	Regulation costs	1/5th to retail for Q1 (water only); 1/9th to retail for Q2-Q4 (water & waste)
<i>Health & Safety</i>	Management estimate	Health & Safety activities are allocated between wholesale and retail. Standard Dams and Assurance and Resilience activities are allocated to Water.
<i>Technology</i>	Direct cost attribution & FTE	IS support costs are attributed to specific IS systems which are then allocated to business areas, wholesale, retail or general and support using headcount numbers.

Wholesale is further allocated between water and waste water based on wholesale headcount.

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.

<i>Packsaddle Head Office costs</i>	Occupancy	The Packsaddle office site is shared by wholesale and retail and allocated by number of heads occupying the building. A SAP HR report with employee location and cost centre coding provides the data source. Costs are allocated based on the occupation of the sites and the employees' cost centre price allocation to establish the price control usage of the site.
<i>Portfolio Management</i>	Estate Legal ownership	Allocate the portfolio management cost of looking after the title ownership of the estate. This is achieved by splitting the Hafren Dyfrdwy title ownership by price control. This is after recharging the cost of collecting and managing rental income.
<i>Property operational costs</i>	Transactional analysis	The Property operational costs are allocated based on causality. A transactional analysis of the operational site costs cost centre is performed to identify spend by site and therefore the price control business unit.
<i>Group Commercial</i>	Time spent	Timesheet templates completed by Group Commercial team members.
<i>Stores Management</i>	Volume of stores issues	Volume of store issues multiplied by price control allocation of receiving cost centres.

G&S costs are allocated between household and non-household based on FTE.

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

Support area	Water	Waste water	Retail HH	Retail NHH	Total
<i>Group commercial (including Transformation)</i>	43.6%	41.7%	13.7%	1.0%	100.0%
<i>Transport</i>	88.8%	9.9%	1.2%	0.1%	100.0%
<i>Directors</i>	81.0%	1.9%	15.9%	1.2%	100.0%
<i>General counsel</i>	72.6%	5.8%	20.1%	1.5%	100.0%
<i>Human resources</i>	61.9%	13.4%	22.7%	2.0%	100.0%
<i>Strategy & regulation (incl. Communications)</i>	54.4%	32.1%	12.6%	0.9%	100.0%
<i>Finance, Assurance & BI (incl. Insurance & Misc. Reporting)</i>	71.2%	6.8%	20.4%	1.6%	100.0%
<i>Information Systems</i>	59.6%	5.8%	32.2%	2.4%	100.0%
<i>Property</i>	77.6%	11.7%	10.0%	0.7%	100.0%

12. 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:

<i>Owner(s)</i>	<i>Process / activity</i>
<i>Project Manager</i>	Submit a business case template (project/ application) outlining the operating and capital expenditure.
<i>Programme Board</i>	Discuss and review project with the Finance Analyst teams.
<i>Investment Governance Analyst</i>	<p>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.</p> <p>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 judgment on the issue.</p>
<i>Group Finance</i>	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.

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