

Bulk Charges for NAVs

2022-2023



Wessex Water
YTL GROUP

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1. About this document

This document sets out Wessex Water Services Limited’s approach to setting charges for New Appointments and Variations (NAVs) for 2022-23. Alongside this document, we also provide an excel calculator to allow NAVs to easily assess the likely charges they will incur. Appendix 1 provides a worked example using the calculator.

The Company has an obligation to publish its range of charges each year of which there are a number of documents. This document fits in with the Company’s charges publications as per figure 1 below.

Figure 1: Charges publication documents

<u>Wholesale charges</u>	<u>Household charges</u>	<u>Bulk charges for NAVs</u>	<u>New connection services charges</u>
Wholesale charges scheme	Household charges scheme	Bulk charges for NAVs scheme	New connection services charges scheme
Wholesale Charges Board assurance statement	Household Charges Scheme Board assurance statement	Bulk Charges for NAVs Board assurance statement	New connection services charges Board assurance statement
	Household charges statement of significant changes	Bulk Charges for NAVs calculator	New connection services charges calculator
			New connection services charges worked examples

For full-service NAVs, we will apply the charging arrangements within this document alongside our statement of approach to full-service NAVs, which is published separately on our website <https://www.wessexwater.co.uk/services/building-and-developing/new-appointments-and-variations>. This sets out how we treat income offsets, avoided costs and communicate with full-service NAVs.

We set out the background and contact details in section 3. We provide a summary of our approach in section 4 and provide further detailed information in section 5. Our charges are set out in the schedule of tariffs in section 6 of this document. The application of charges set out in this document may vary by site and circumstance.

Our contact details are as follows:

Email: wholesale@wessexwater.co.uk

Telephone: 0330 123 1122

Write to: Head of Wholesale Services
Wessex Water
Claverton Down
Bath, BA2 7WW

Please contact us if you wish to:

- Obtain a copy of this document or the calculation spreadsheet (also available on our website <https://www.wessexwater.co.uk/our-charges>)
- Notify us if you feel we have not met the standards of service you would expect or you have any other queries

2. Glossary

Term	Definition
Bulk agreements	Bulk supply agreements and bulk discharge agreements.
Bulk charges	The charges for bulk services, i.e. bulk supplies and bulk discharges.
Bulk discharge	Supply of waste water from one wastewater company to another.
Bulk discharge agreement	A contract setting out the terms and conditions for bulk discharges.
Bulk services	Bulk supplies and bulk discharges.
Bulk supply	Supply of water from one water company to another.
Bulk supply agreement	A contract setting out the terms and conditions for bulk supply.
End-customers	Household retail customers and business retail customers.
Full-service NAV	A full-service NAV is a NAV that provides drinking water (either buying it wholesale or supplying it from a local resource like a borehole) and treats wastewater onsite and then discharges it locally or treats it and reuses it for irrigation and toilet flushing.
New Appointment and Variation (NAV)	A water company that (either directly or indirectly) has replaced, or will replace, one or more incumbent water companies in relation to specific sites and for whom we do not currently set individual price controls. Although a NAV can operate its own treatment facilities, a NAV normally obtains a bulk supply of water from, and/or agrees a bulk discharge of wastewater to, an incumbent water company.

3. Introduction

3.1 Our business

We supply water and wastewater services to more than 2.8 million customers in an area covering around 10,000 km².

Figure 2: Our business



3.2 Background to bulk charges for NAVs

A new appointment is made when a limited company applies for and is appointed by Ofwat to provide water and/or sewerage services for a specific geographic area. A variation is where an existing appointed company (an “appointee”) asks Ofwat to vary its appointment so it can extend the areas it provides services to. The NAV market was established to promote competition in services, especially those relating to the last mile of infrastructure before a connection.

Therefore as a water and sewerage company our NAV charges are calculated using the standard wholesale rate less the avoided costs of a NAV operating this last mile of infrastructure and this is known as the “wholesale minus” approach.

3.3 Complaints to Ofwat

If the service or charges you have received from us are not satisfactory, or if you feel that we are in breach of the Water Industry Act 1991 or the Competition Act 1998 you can contact Ofwat at the following address:

Ofwat
Centre City Tower
7 Hill Street
Birmingham, B5 4UA

4. Our approach to setting charges

4.1 Regulatory best practice

We are fully engaged with industry working groups led by Ofwat looking at best practice in setting bulk supply charges. At this stage, there are no firm recommendations published.

To this end, we are not making any major changes to how we set bulk supply charges this year. However, we are responding to the desire for more bottom-up charging by splitting our NAV discount between pure network costs and pumping costs to ensure a better reflection of our avoided costs on a site-by-site basis.

4.2 Summary of our approach

Consistent with last year, we have used a “wholesale minus” approach to set bulk supply and discharge tariffs. The following explanation of our approach is applicable to both water supply and waste services unless otherwise stated.

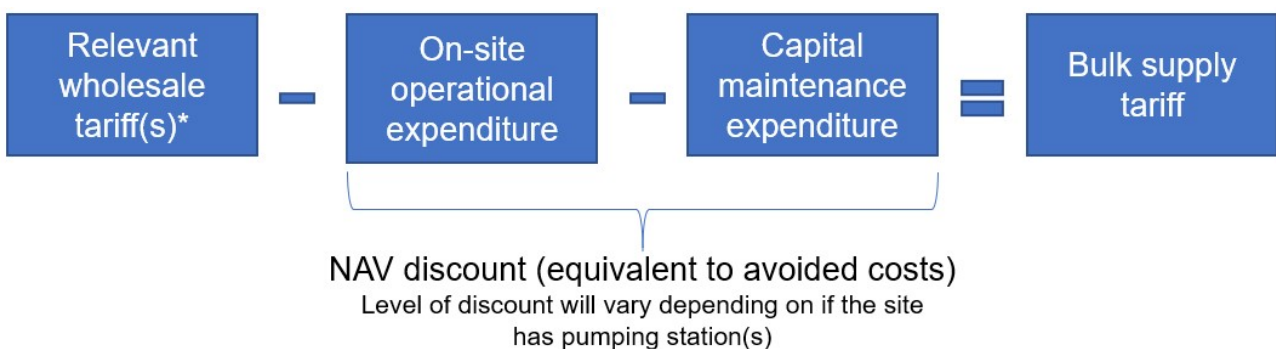
The tariffs set for each NAV appointment are site-specific and depend on the number and type of properties served.

We start with the relevant wholesale tariff(s) and deduct costs that we would not incur if a NAV operated and supplied the new development instead of us. As part of this we take account of any on-site leakage.

The “minus” element is made up of avoided on-site operational expenditure and the avoided costs of future capital maintenance, such as asset replacement and asset renewals. The level of the operational and maintenance costs we avoid and thus the level of the NAV discount depends on if the NAV site has a pumping station(s).

The bulk supply charge is calculated as the relevant wholesale tariff(s) less the NAV discount, as summarised in figure 3 below.

Figure 3: Wholesale minus approach for calculating bulk supply tariffs (supply and waste)



* Adjustment for leakage is made

As assets on a new development site are now fully funded by the Developer, we would not add any assets to our RCV if we were to take on providing water and/or wastewater services to the site. Therefore, we do not consider depreciation or returns as avoided costs if a NAV were to take on a site.

5. How we calculate charges

5.1 The relevant wholesale tariffs

Based on Ofwat’s guidance, the relevant starting point for the calculation is the appropriate wholesale tariffs that reflect the NAV’s end-customers on a particular site. We create an ‘overall weighted average’ tariff that reflects the combined wholesale charges of all the NAV’s customers on that site. This means we need to account for different types of end-customer, including households and non-households, as well as different discharge arrangements.

We follow the same process for calculating water and wastewater NAV tariffs. On wastewater there are adjustments for foul water, surface water drainage and highway drainage, as well as an appropriate return to sewer rate (normally 95%) calculated from the water volume supplied (if no set discharge volume is supplied).

Our wholesale charges are set out in Section 6¹. The key charges for 2022-23 are shown in table 3 below².

Table 3 Summary of wholesale charges

Charge element	Household	Non-household
Measured water		
Fixed charge meter size < 25mm (£ per annum)	4	4
Volumetric charge (£ per m ³)	2.0182	2.0590
Measured wastewater		
Fixed Surface Water drainage charge ³ (£ per annum)	23	23
Fixed Highway Water drainage charge (£ per annum)	21	21
Volumetric charge (£ per m ³)	1.6268	1.6549

Each bulk supply or discharge tariff will therefore be set with reference to the expected number of each customer type and their consumption on a particular site. We will require detailed information from an applicant to calculate the correct tariff. A final site-specific fixed charge will be applied for water to recover the cost of the single bulk meter, based upon the total expected water consumption.

As with our wholesale charges, we will abate charges where premises do not discharge surface water into our network.

¹ They are also set out in our Wholesale Charges document, which is published on our website by 13 January each year with charges applying from 1 April.

² The full range of our wholesale tariffs may apply depending on the types of customer served by a NAV.

³ Customers eligible for the surface water drainage rebate will not be charged for this element.

5.1.1 Taking account of leakage

We will make a downward adjustment of 5.5% to the volume recorded at the bulk meter to account for any on-site leakage that might impact the effective price at the end-customers' meters. This deduction is applied directly to the recorded volume consumed on a NAV site.

If there is a wastewater bulk meter then the reading from it will be used to calculate wastewater charges. If there is no wastewater bulk meter then the water volume less the leakage adjustment and the return to sewer will be used to calculate wastewater charges.

This adjustment accounts for the long-run average volume of water that would have counterfactually leaked from the network beyond the bulk meter, had we been operating the network instead of a NAV.

To calculate the quantum of on-site leakage as a percentage of the total volume at the bulk meter, we have constructed a theoretical model using expert engineering knowledge that calculates the leakage in an area over 60 years. We created a notional local network with a demand forecast consistent with that made in our most recent Water Resources Management Plan (2019). Over a 60-year horizon, average consumption per domestic property reduces from 104m³ per annum in 2020 to 93m³ per annum in 2080.

At year zero, leakage is almost zero in the newly laid network. A deterioration function was then created which simulates the increase in leakage over time as the network deteriorates. This function is exponential, so over time leakage increases significantly. An intervention threshold of 50 litres per property per day (or circa 20% of billed volume) was chosen as the point at which a company would intervene to reduce leakage back to a reasonable level. As the network deteriorates, leakage increases faster, and exponentially more frequent interventions are required. The costs of these interventions are included, on an average basis, within our avoided cost calculation.

The resulting 60-year average leakage is 15 litres per property per day compared to the total average bulk meter volume of 264 litres per property per day. This is calculated as 5.5% of total volume.

We recognise the potential variability of this calculation and have therefore performed sensitivity testing of all the variable parameters, trialling significantly different deterioration rates and different intervention thresholds. This analysis resulted in leakage figures of 4.5% to 6.5%, a variation of +/- 1% compared to the average value. This gives greater confidence that the approach we have taken is reasonable and robust.

5.2 Calculation of the avoided on-site costs

This element of the 'minus' calculation is assessed with reference to the costs that we avoid because the NAV is serving the site rather than us.

As set out in Figure 3, we avoid costs associated with our operations and capital maintenance because the NAV serves the site instead of ourselves.

The level of avoided costs (both opex and capex) varies materially depending on whether the site has a pumping station(s). The below sections illustrate how the level of avoided costs varies with or without pumping station(s).

Table 4 summarises the avoided costs for water and wastewater services, for sites with and without pumping station(s).

Table 4: Summary of avoided expenditure

Charge element	Water (£ per m ³)	Wastewater (£ per m ³)
For sites with pumping station(s)		
Avoided operating expenditure	0.1355	0.0271
Avoided maintenance expenditure	0.1146	0.0350
Total NAV discount	0.2501	0.0622
For sites without pumping station(s)		
Avoided operating expenditure	0.1686	0.0546
Avoided maintenance expenditure	0.1232	0.0365
Total NAV discount	0.2918	0.0912

The following sub-sections explain in turn how each avoided cost is calculated.

5.3 Operational expenditure

The avoided on-site operational expenditure refers to costs avoided in the operating, maintaining, and monitoring of assets along with all associated overheads. This includes but is not limited to labour costs, power, materials and consumables, Local Authority rates, and general and support costs. Table 5 sets out the avoided operational expenditure by activity.

Table 5: Summary of avoided operational expenditure by activity

Expenditure area	Avoided cost (£ per m ³)
Water supply	
Local water mains network	0.0478
Communication pipes	0.0460
Meters, meter boxes and management	0.0418
Booster pumping stations*	0.0331
Total avoided operational expenditure	0.1686
Wastewater	
Local sewer network	0.0271
Sewage pumping stations*	0.0275
Total avoided operational expenditure	0.0546

*Site specific

5.4 Capital maintenance expenditure

The avoided capital costs refers to expenditure on future activities such as asset replacement and asset renewals required to maintain the network. This includes all infrastructure maintenance and replacement costs.

We estimate these on-site ongoing costs with reference to the actual costs that we incur across our region, using the most recent three years of network data published as part of our regulatory

accounts. For 2022-23, we have therefore used cost information from 2018-19 to 2020-21. These costs are inflated to a 2022-23 price base using the relevant inflation indices.

We then use asset data, asset values and expert engineering judgment to allocate the overall network costs to the different elements of the network. For those network elements that a typical NAV would operate, these costs are then divided by the total billed consumption to result in unit costs per cubic metre.

Table 6: Summary of avoided maintenance expenditure by activity

Expenditure area	Avoided cost (£ per m ³)
Water supply	
Local water mains network	0.0404
Communication pipes	0.0389
Meters, meter boxes and management	0.0353
Booster pumping stations*	0.0086
Total avoided maintenance expenditure	0.1232
Wastewater	
Local sewer network	0.0350
Sewage pumping stations*	0.0015
Total avoided maintenance expenditure	0.0365

*Site specific

5.5 Calculation of bulk supply tariffs

As summarised in figure 3, the bulk supply charge is calculated as the relevant wholesale tariff(s) less the NAV discount (which is equivalent to the avoided costs).

6. Schedule of tariffs

Water wholesale tariffs

Domestic / Business	Domestic	Business					
Type of water service	Non-interruptible	Non-interruptible				Interruptible	
Customer using (m ³ /annum) of water service	≥0	0-19,999	20,000-161,999	162,000-341,999	≥342,000	5,000-19,999	≥20,000
Meter Charge <25mm (£ per annum)	4	4				152	
Meter Charge ≥25mm (£ per annum)	48	48				196	
Site Based Charge (£ per annum)			99	139	224		362
Volume Charge ≤20,000m ³ (£ per m ³)	2.0182	2.0590	2.0590	2.0590	2.0590	1.9339	1.9339
Volume Charge >20,000m ³ ≤100,000m ³ (£ per m ³)			1.6872				1.2067
Volume Charge >100,000 ≤150,000m ³ (£ per m ³)				0.9844			
Volume Charge >150,000m ³ (£ per m ³)							
Decreasing Block Volume Threshold (m ³ per annum)	-	-	20,000	100,000	150,000	-	20,000

Wastewater wholesale tariffs

Domestic / Business	Domestic		Business	
	SWD	HWD	SWD	HWD
Drainage charge meter size <25mm	23	21	23	21
Drainage charge meter size ≥25mm <30mm	115	109	115	109
Drainage charge meter size ≥30mm <40mm	188	178	188	178
Drainage charge meter size ≥40mm <50mm	258	244	258	244
Drainage charge meter size ≥50mm <65mm	474	447	474	447
Drainage charge meter size ≥65mm <80mm	689	650	689	650
Drainage charge meter size ≥80mm <100mm	1,211	1,142	1,211	1,142
Drainage charge meter size ≥100mm <125mm	2,100	1,979	2,100	1,979
Drainage charge meter size ≥125mm <150mm	2,853	2,690	2,853	2,690
Drainage charge meter size ≥150mm <200mm	4,307	4,060	4,307	4,060
Drainage charge meter size ≥200mm	5,706	5,379	5,706	5,379
Drainage charge where water use is >20 MI and <162 MI	1,427	1,345	1,427	1,345
Drainage charge where water use is >162 MI and <342 MI	3,580	3,375	3,580	3,375
Drainage charge where water use is >342 MI	5,706	5,379	5,706	5,379
Volume Charge ≤20,000m ³ (£ per m ³)	1.6268		1.6549	

NAV Avoided Costs

For site without pumping station(s)

Charge element	Water (£ per m ³)	Wastewater (£ per m ³)
Avoided operational expenditure	0.1355	0.0271
Avoided maintenance expenditure	0.1146	0.0350
Total NAV discount	0.2501	0.0622

For site with pumping station(s)

Charge element	Water (£ per m ³)	Wastewater (£ per m ³)
Avoided operational expenditure	0.1686	0.0546
Avoided maintenance expenditure	0.1232	0.0365
Total NAV discount	0.2918	0.0912

7. Appendix 1 - worked example using the Excel Calculator

As a worked example, we will examine a theoretical new development of 500 households, with standard meter sizes and all of which have their own surface water drainage (and therefore should not be charged for this element). For this site, data would be input into our Bulk Charges for NAVs calculator 2022-23 which is available on our website⁴, we are also happy to provide a copy on request. Each sheet of the calculator will be examined in turn.

7.1 Inputs sheet

First the initial details of the site are input including the name of the customer, which services are being supplied and whether a waste volume is provided.

For the purposes of this example we will assume that the NAV is supplying both water and wastewater services and that the waste volume is not provided. We will also assume that the site has water booster pumping and sewerage pumping station(s). The leakage allowance as stated above is 5.5% and the standard return to sewer for Wessex Water is 95% and these figures will be used to calculate volumes:

Inputs

Customer Name	
Water?	Y
Wastewater?	Y
Site has water booster pumping station(s)?	Y
Site has sewerage pumping station(s)?	Y
Leakage allowance (%)	5.5%
Waste volume provided?	N
Return to sewer (%)	95%

⁴ <https://www.wessexwater.co.uk/our-charges>

The consumption for water is calculated as the number of households multiplied by the forecast average household consumption for Wessex Water customers in 2022-23 which is 94.22m³ for the year (in this example 500 households * 94.22m³ = 47,110m³).

The consumption, along with details of the NAV customer numbers are input into the water and sewerage sections:

Water

Domestic / Business Type of water service	Domestic	Business						Total
		Non-interruptible				Interruptible		
Customer using (m ³ /annum) of water service	≥0	0-19,999	20,000-161,999	162,000-341,999	≥342,000	5,000-19,999	≥20,000	
Total volume per year (m ³)	47,110							47,110
Nr customers	500							500
Nr meters <25mm	500							500
Nr meters ≥25mm	0							0

Wastewater

Domestic / Business Drainage arrangements	Domestic			Business			Total
	Full	Incl. SWD rebate	Total	Full	Incl. SWD rebate	Total	
Total volume discharged per year (m ³)							
Nr customers	0	500	500				500
Nr meters where size <25mm	0	500	500				500
Nr meters where size ≥25mm <30mm							0
Nr meters where size ≥30mm <40mm							0
Nr meters where size ≥40mm <50mm							0
Nr meters where size ≥50mm <65mm							0
Nr meters where size ≥65mm <80mm							0
Nr meters where size ≥80mm <100mm							0
Nr meters where size ≥100mm <125mm							0
Nr meters where size ≥125mm <150mm							0
Nr meters where size ≥150mm <200mm							0
Nr meters where size ≥200mm							0
Nr customers where water use is >20 MI and <162 MI							0
Nr customers where water use is >162 MI and <342 MI							0
Nr customers where water use is >342 MI							0

Return to sewer adjustment to be applied to supply volume (less leakage allowance) if discharge volume not provided

7.2 Water calculation sheet

For water the leakage is deducted from the volume before the weighted average wholesale tariff is calculated by combining the fixed and volumetric charge revenue and dividing by the volume:

Calculation of weighted average wholesale water tariff

Wholesale tariffs

Domestic / Business	Domestic		Business				
	Non-interruptible		Non-interruptible			Interruptible	
Type of water service	≥0	0-19,999	20,000-161,999	162,000-	≥342,000	5,000-19,999	≥20,000
Customer using (m ³ /annum) of water service	≥0	0-19,999	20,000-161,999	162,000-	≥342,000	5,000-19,999	≥20,000
Meter Charge <25mm (£ per annum)	4	4				152	
Meter Charge ≥25mm (£ per annum)	48	48				196	
Site Based Charge (£ per annum)			99	139	224		362
Volume Charge ≤20,000m ³ (£ per m ³)			2.0590	2.0590	2.0590	1.9339	1.9339
Volume Charge >20,000m ³ ≤100,000m ³ (£ per m ³)	2.0182	2.0590					
Volume Charge >100,000 ≤150,000m ³ (£ per m ³)			1.6872	1.2067			1.5852
Volume Charge >150,000m ³ (£ per m ³)					0.9844		
Volume threshold	-	-	20,000	100,000	150,000	-	20,000

Supply information

Domestic / Business	Domestic		Business					Total
	Non-interruptible		Non-interruptible			Interruptible		
Type of water service	≥0	0-19,999	20,000-161,999	162,000-	≥342,000	5,000-19,999	≥20,000	
Customer using (m ³ /annum) of water service	≥0	0-19,999	20,000-161,999	162,000-	≥342,000	5,000-19,999	≥20,000	
Nr customers	500	0	0	0	0	0	0	500
Nr meters <25mm	500	0				0		500
Nr meters ≥25mm	0	0				0		0
Total volume per year (m ³)	47,110	0	0	0	0	0	0	47,110
Total leakage volume per year (m ³)	2,591	0	0	0	0	0	0	2,591
Total volume per year less leakage (m ³)	44,519	0	0	0	0	0	0	44,519

Weighted wholesale tariff

Domestic / Business	Domestic		Business					Total
	Non-interruptible	Non-interruptible	Non-interruptible	Non-interruptible	Non-interruptible	Interruptible	Interruptible	
Type of water service	≥0	0-19,999	20,000-161,999	162,000-	≥342,000	5,000-19,999	≥20,000	
Customer using (m ³ /annum) of water service	≥0	0-19,999	20,000-161,999	162,000-	≥342,000	5,000-19,999	≥20,000	
Fixed charges (£ per yr)	2,000	0	0	0	0	0	0	2,000
Volume charges (£ per yr)	95,077	0	0	0	0	0	0	95,077
Leakage adjustment (£ per yr)	-5,229	0	0	0	0	0	0	-5,229
Volume charges less leakage adjustment	89,848	0	0	0	0	0	0	89,848
Total charges (£ per yr)	91,848	0	0	0	0	0	0	91,848

Summary

Charge type	Total
Fixed charges (£ per yr)	2,000
Volume charges (£ per yr)	89,848
Total charges (£ per yr)	91,848
Total volume per year less leakage (m ³)	44,519
Final weighted average charge (£ per m ³)	2.0631

The NAV avoided costs are then deducted from the weighted average charge to give a final volumetric bulk supply charge for the NAV:

Deduction of avoided costs from final weighted average charge

Avoided costs	(£/m ³)
Avoided operating expenditure	0.1686
Avoided maintenance & renewals	0.1232
Total NAV discount	0.2918

Final bulk supply charge

	(£/m ³)
Final bulk supply charge	1.7713

7.3 Sewerage calculation sheet

The return to sewer rate of 95% is applied to the post-leakage water volume to calculate the wastewater volume. The weighted average wholesale tariff is calculated by combining the fixed and volumetric charge revenue and dividing by the volume:

Calculation of weighted average wholesale wastewater tariff

Wholesale tariffs

Domestic / Business	Domestic		Business	
	Full	Incl. S/W/D rebate	Full	Incl. S/W/D rebate
Drainage arrangements	44	21	44	21
Drainage charge meter size <25mm	224	103	224	103
Drainage charge meter size ≥25mm <30mm	366	178	366	178
Drainage charge meter size ≥30mm <40mm	502	244	502	244
Drainage charge meter size ≥40mm <50mm	321	447	321	447
Drainage charge meter size ≥50mm <65mm	1,333	650	1,333	650
Drainage charge meter size ≥65mm <80mm	2,353	1,142	2,353	1,142
Drainage charge meter size ≥100mm <125mm	4,013	1,373	4,013	1,373
Drainage charge meter size ≥125mm <150mm	5,543	2,630	5,543	2,630
Drainage charge meter size ≥150mm <200mm	8,367	4,060	8,367	4,060
Drainage charge meter size ≥200mm	11,085	5,373	11,085	5,373
Drainage charge where water use is >20 MI and <162 MI	2,772	1,345	2,772	1,345
Drainage charge where water use is >162 MI and <342 MI	6,355	3,375	6,355	3,375
Drainage charge where water use is >342 MI	11,085	5,373	11,085	5,373
Volume Charge ≤20,000m ³ (£ per m ³)	1,6268		1,6543	

Supply information

Domestic / Business	Domestic		Business		Total
	Full	Incl. S/W/D rebate	Full	Incl. S/W/D rebate	
Drainage arrangements	0	500	0	0	500
Nr customers	0	500	0	0	500
Nr meters where size <25mm	0	0	0	0	0
Nr meters where size ≥25mm <30mm	0	0	0	0	0
Nr meters where size ≥30mm <40mm	0	0	0	0	0
Nr meters where size ≥40mm <50mm	0	0	0	0	0
Nr meters where size ≥50mm <65mm	0	0	0	0	0
Nr meters where size ≥65mm <80mm	0	0	0	0	0
Nr meters where size ≥80mm <100mm	0	0	0	0	0
Nr meters where size ≥100mm <125mm	0	0	0	0	0
Nr meters where size ≥125mm <150mm	0	0	0	0	0
Nr meters where size ≥150mm <200mm	0	0	0	0	0
Nr meters where size ≥200mm	0	0	0	0	0
Nr customers where water use is >20 MI and <162 MI	0	0	0	0	0
Nr customers where water use is >162 MI and <342 MI	0	0	0	0	0
Nr customers where water use is >342 MI	0	0	0	0	0
Total volume discharged per year (m ³)	42,293		0		42,293

Weighted wholesale tariff

Domestic / Business	Domestic		Business		Total
	Full	Incl. S/W/D rebate	Full	Incl. S/W/D rebate	
Drainage arrangements	0	10,500	0	0	10,500
Fixed charges (£ per yr)	68,802		0		68,802
Volume charges (£ per yr)	79,302		0		79,302
Total charges (£ per yr)	148,104		0		148,104

Summary

Charge type	Total
Fixed charges (£ per yr)	10,500
Volume charges (£ per yr)	68,802
Total charges (£ per yr)	79,302
Total volume discharged per year (m ³)	42,293
Final weighted average charge (£ per m ³)	1.8751

The avoided costs are then deducted from the weighted average charge to give a final volumetric bulk discharge charge for the NAV:

Deduction of avoided costs from final weighted average charge

Avoided costs

	(£/m ³)
Avoided operating expenditure	0.0546
Avoided maintenance & renewals	0.0365
Avoided costs total	0.0912

Final bulk discharge charge

	(£/m ³)
Final bulk discharge charge	1.7839

7.4 Outputs sheet

The Outputs sheet gives a summary of the charges and discount for each service:

Outputs

Customer Name

Outputs	Water	Wastewater
Weighted wholesale tariff (£/m ³)	£2.0631	£1.8751
Avoided operating expenditure (£/m ³)	£0.1355	£0.0271
Avoided maintenance & renewals (£/m ³)	£0.1146	£0.0350
NAV discount (£/m ³)	£0.2501	£0.0622
NAV volumetric charge (£/m ³)	£1.8130	£1.8129

Total annual volume ² (m ³)	44,519	42,293
Total annual volume charge (£)	£89,848	£68,802
NAV fixed charge (£)	£2,000	£10,500
NAV Discount (£)	-£11,135	-£2,629
Final charge (£)	£80,713	£76,673
Total NAV discount including leakage (£)	-£16,364	-£2,629
Total NAV discount (%)	-16.9%	-3.3%

² After leakage adjustment to volume