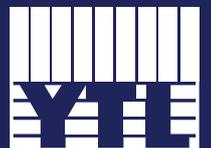


BULK CHARGES FOR NAVS 2020-2021

Wessex Water
YTL GROUP



Executive summary

This document sets out Wessex Water Services Limited's approach to setting charges for New Appointments and Variations (NAVs) for 2020/21. This document is available on our website, but we are happy to provide you with a copy on request.

Our charges are set out in the schedule of tariffs towards the end of this document. We set out the background, scope and contact details in section 1. We provide a summary of our approach in section 2 and provide further detailed information in section 3.

In conjunction with this document, we also provide a calculation spreadsheet to allow potential NAVs to easily assess the likely charges they will incur.

To request a copy of this document or the calculation spreadsheet, please either:

Email: wholesale@wessexwater.co.uk

Telephone: 01225 524 375

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

Contents

Executive summary	1
Contents	2
1. Introduction	3
1.1 Our business	3
1.2 Background to bulk charges for NAVs	3
1.3 Scope of this document	3
1.4 Our contact details	4
1.5 Complaints and disputes relating to standards of services	4
1.6 Complaints to Ofwat	4
2. Summary of our approach	5
2.1 How will the charges be set?	5
2.2 An overview of the calculation	5
3. Detailed explanation of our approach	7
3.1 The relevant starting point	7
3.2 Taking account of leakage	8
3.3 Calculation of the avoided on-site costs	9
3.4 Calculation of the avoided depreciation	9
3.5 The avoided return for on-site assets	10
Schedule of tariffs	11
Appendix A Glossary and defined terms	12

1. Introduction

1.1 Our business

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

Figure 1 Our business



1.2 Background to bulk charges for NAVs

Ofwat issued guidance for setting bulk charges to NAVs in May 2018, it plans to translate this guidance into charging rules in the future. Our 2019/20 bulk charges for NAVs reflected this guidance and the same methodology has been applied for 2020/21.

1.3 Scope of this document

This document sets out the calculations that will be used to fix charges for providing bulk supply or discharge services to NAVs. Charges for water, wastewater and trade effluent, primary and non-primary charges to residential and commercial premises, and services to developers are all fixed under separate charges schemes which can be found on our website.

This document sets out our charges for the 2020/21 charging year (from 1 April 2020 until 31 March 2021).

We note that the charges set out in this document may vary by site and circumstance.

For full-service NAVs, we will apply these charging arrangements alongside our statement of approach to full-service NAVs, which is published separately on our website. This sets out how we treat income offsets, avoided costs and communication for full-service NAVs.

1.4 Our contact details

Our contact details are as follows.

Email: wholesale@wessexwater.co.uk

Telephone: 01225 524 375

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

1.5 Complaints and disputes relating to standards of services

If you feel we have not met the standards of service you would expect, you can contact us in one of two ways.

Email: wholesale@wessexwater.co.uk

Write to: Managing Director
Wessex Water
Claverton Down
Bath, BA2 7WW

1.6 Complaints to Ofwat

You may want to complain to Ofwat about the service or charges you have received from us, or if you feel that we are in breach of the Water Industry Act 1991 or the Competition Act 1998. Ofwat's address is given below.

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

2. Summary of our approach

2.1 How will the charges be set?

Ofwat proposes to use a “wholesale minus” approach to setting bulk supply and discharge tariffs, meaning that each NAV appointment will use a bespoke calculation to set the tariff, dependent on the number and type of properties served and the volumes they consume and/or discharge. Figure 1 below sets out the building blocks for the calculation. We start with the relevant wholesale tariff(s) and deduct costs that we would not incur if a NAV supplied the new development instead of us. The “minus” element comprises three components:

- the avoided on-site operational costs and the avoided costs of future capital replacement (on-site ongoing costs),
- the avoided depreciation, and
- a NAV-specific weighted average cost of capital (WACC) for the on-site assets (NAV adjusted return).

Figure 1 Components of the wholesale-minus approach



2.2 An overview of the calculation

We set out in detail the approach we have taken to calculate the tariffs in section 3, but the core elements are explained below. The schedule of tariffs at the end of this document set out our charges.

First, the relevant wholesale tariffs will be used to calculate a weighted average fixed and volumetric charge, based on the expected number of properties and consumption on the site. An allowance for leakage of 5.5% is applied to the consumption forecasts as part of this calculation.

The following elements will then be deducted from the weighted average charge:

- A value for the entirety of avoided on-site costs, including operating, maintaining and monitoring the assets, and replacing the assets over time.
- Any depreciation of the assets we would recover from our wider customer base.
- A value for the return on the on-site assets, reflecting the higher WACC for NAVs.

We provide a summary table of the avoided costs in Table 1 below.

Table 1 Summary of avoided costs

Charge element	Water (£ per m ³)	Wastewater (£ per m ³)
Avoided operating costs	0.2064	0.0505
Avoided depreciation ¹	0.0040	0.0031
Avoided tax/adjusted return	0.1266	0.0977
Total NAV discount	0.3370	0.1513

¹If applicable.

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

We have also created a calculation spreadsheet, which will allow potential NAVs to easily assess the likely charges they will incur.

We update all elements of the calculation each year to reflect the most up to date information. This includes, but is not limited to:

- the relevant wholesale tariffs;
- the most recent cost information;
- the cost of capital allowed by Ofwat; and
- new information on leakage.

3. Detailed explanation of our approach

3.1 The relevant starting point

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.

Our wholesale charges are set out in the schedule of tariffs at the end of this document. They are also set out in our Wholesale Charges document, which is published on our website in mid-January each year with charges applying from 1 April. The key charges for 2020/21 are shown in the table below, however all our wholesale tariffs are available depending on the types of customer served by a NAV.

Table 2 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)	1.9480	1.9998
Measured wastewater		
Fixed Surface Water drainage charge ² (£ per annum)	21	21
Fixed Highway drainage charge (£ per annum)	21	21
Volumetric charge (£ per m ³)	1.5638	1.5944

²Customers eligible for the surface water drainage rebate will be not be charged for this element.

Each bulk supply or discharge tariff will therefore be set by reference to the expected number of each customer type and consumption on a particular site. We will require detailed information from an applicant to calculate the correct tariff. A final site-based 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.

We have also created a calculation spreadsheet to allow potential NAVs to easily assess the likely charges they will incur.

3.2 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 adjustment accounts for the long-run average volume of water that would have hypothetically 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 2019 Water Resources Management Plan. 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 pipe 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 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.

3.3 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.

It is calculated as an annuity against the ongoing costs that we would have incurred over the lifetime of the assets. It includes all operating, maintenance, monitoring and replacement costs, including but not limited to:

- Labour
- Power
- Materials and consumables
- Local authority rates
- General and support costs
- Renewals costs

We estimated 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 2020/21, we have therefore used cost information from 2016/17 to 2018/19. These costs are inflated to a 2020/21 price base using the relevant inflation indices.

We have then used asset data, asset values and expert engineering judgment to allocate the overall network costs to the different elements of the network. These costs are then divided by the total billed consumption on our local network to result in unit costs per cubic metre.

Table 3 Summary of avoided operational costs

Cost area	Avoided cost (£ per m ³)
Water supply	
Local water mains network	0.0722
Communication pipes	0.0695
Meters, meter boxes and management	0.0646
Total avoided operational cost	0.2064
Wastewater	
Local sewer network	0.0505
Total avoided operational cost	0.0505

3.4 Calculation of the avoided depreciation

Where we are requisitioned to lay new mains on a site, the developer pays us to complete the work. Our developer charges for 2019/20 provided a 15% income offset to requisition charges, so the developer paid 85% of the construction value. The net value was added to our regulatory capital value (RCV) and depreciated over time. This year the 15% income offset has been moved to the infrastructure charge and so the developer is now paying for 100% of the construction value of a new requisition. From now on, we will see no additions

to the RCV from requisitions and consequently there will be no avoided depreciation to account for.

For NAVs whose requisitions occurred on or before 31 March 2020, the rate of avoided depreciation for 2020/21 is calculated in the same manner as last year.

3.5 The avoided return for on-site assets

We have applied a NAV-specific WACC of 4.42% which is based upon Ofwat’s May 2018 guidance and updated with Ofwat’s policy decision on the building blocks of the cost of capital from its PR19 final determination. We have calculated the return on the value of the local network had we undertaken the development instead of the NAV. This figure has then been adjusted to represent the NAV-specific WACC.

The resulting applicable returns to the local network are shown in the table below.

Table 4 Summary of avoided return

Cost area	Avoided cost (£ per m ³)
Water supply	
Return	0.1175
Tax, etc.	0.0091
Total avoided cost	0.1266
Wastewater	
Return	0.0891
Tax, etc.	0.0085
Total avoided cost	0.0977

Schedule of tariffs

Water wholesale tariffs

Domestic / Business	Domestic	Business					
Type of water service	Non-interruptible	Non-interruptible				Interruptible	
Customer using (m3/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				145	
Meter Charge ≥25mm (£ per annum)	46	46				187	
Site Based Charge (£ per annum)			95	133	214		346
Volume Charge ≤20,000m3 (£ per m3)	1.9480	1.9998	1.9998	1.9998	1.9998	1.8790	1.8790
Volume Charge >20,000m3 ≤100,000m3 (£ per m3)			1.6409	1.1772			1.5425
Volume Charge >100,000 ≤150,000m3 (£ per m3)					0.9626		
Volume Charge >150,000m3 (£ per m3)							
Decreasing Block Volume Threshold (m3 per annum)	-	-	20,000	100,000	150,000	-	20,000

Wastewater wholesale tariffs

Domestic / Business	Domestic		Business	
	SWD	HWD	SWD	HWD
Drainage arrangements				
Drainage charge meter size <25mm	21	21	21	21
Drainage charge meter size ≥25mm <30mm	107	107	107	107
Drainage charge meter size ≥30mm <40mm	175	175	175	175
Drainage charge meter size ≥40mm <50mm	240	240	240	240
Drainage charge meter size ≥50mm <65mm	440	440	440	440
Drainage charge meter size ≥65mm <80mm	640	640	640	640
Drainage charge meter size ≥80mm <100mm	1,125	1,125	1,125	1,125
Drainage charge meter size ≥100mm <125mm	1,950	1,950	1,950	1,950
Drainage charge meter size ≥125mm <150mm	2,650	2,650	2,650	2,650
Drainage charge meter size ≥150mm <200mm	4,000	4,000	4,000	4,000
Drainage charge meter size ≥200mm	5,300	5,300	5,300	5,300
Drainage charge where water use is >20 MI and <162 MI	1,325	1,325	1,325	1,325
Drainage charge where water use is >162 MI and <342 MI	3,325	3,325	3,325	3,325
Drainage charge where water use is >342 MI	5,300	5,300	5,300	5,300
Volume Charge ≤20,000m ³ (£ per m ³)	1.5638		1.5944	

NAV Avoided Costs

Charge element	Water (£ per m ³)	Wastewater (£ per m ³)
Avoided operating costs	0.2064	0.0505
Avoided depreciation ¹	0.0040	0.0031
Avoided tax/adjusted return	0.1266	0.0977
Total NAV discount	0.3370	0.1513

¹If applicable.

Appendix A Glossary and defined terms

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.
NAV (New Appointment or Variation)	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 waste water to, an incumbent water company.