



# New Appointments and Variations: Bulk Charges

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# 1. Context

The New Appointments and Variations (NAV) regime was introduced under the Water Industry Act 1991 (WIA91) to provide a mechanism to facilitate new entry into the water and wastewater sector and to allow appointed undertakers (incumbents) to expand outside of their geographical area of appointment.

Under section 7(4) of WIA91 Ofwat can appoint a company in place of the incumbent only where one of the following criteria is met:

- Unserved - the site is not connected to the water and/or sewerage infrastructure of the existing water company
- Consent - the existing water company consents to the application
- Large user - the premises comprising the site use at least 50Ml in any year (or 250Ml for end-customers of Welsh water companies) and the customer consents.

When deciding how to provide water and wastewater connections for a new development site, the developer can choose between the incumbent, a self-lay provider (SLP) or a NAV. If a NAV is appointed, it becomes the monopoly supplier for the site and generally provides, owns and operates the 'last mile' on-site supply infrastructure and retail services. In some cases NAVs provide a full service, including water treatment and/or wastewater treatment and disposal. More commonly, NAVs purchase services in bulk from the incumbent wholesaler through a bulk agreement. This document sets out the basis for setting these bulk charges to NAVs.

## 1.1 Guidance on charging

In May 2018 Ofwat published their final guidance on 'Bulk charges for NAVs'<sup>1</sup>. This guidance is intended to ensure a level playing field between incumbent water companies, SLPs, developers and NAVs, ensuring that, as far as possible, the increased choice for developers leads to more intense competition and the benefits are passed on to both developers and end-customers in the form of lower prices, better quality services and more innovation. This guidance was further updated in January 2021.

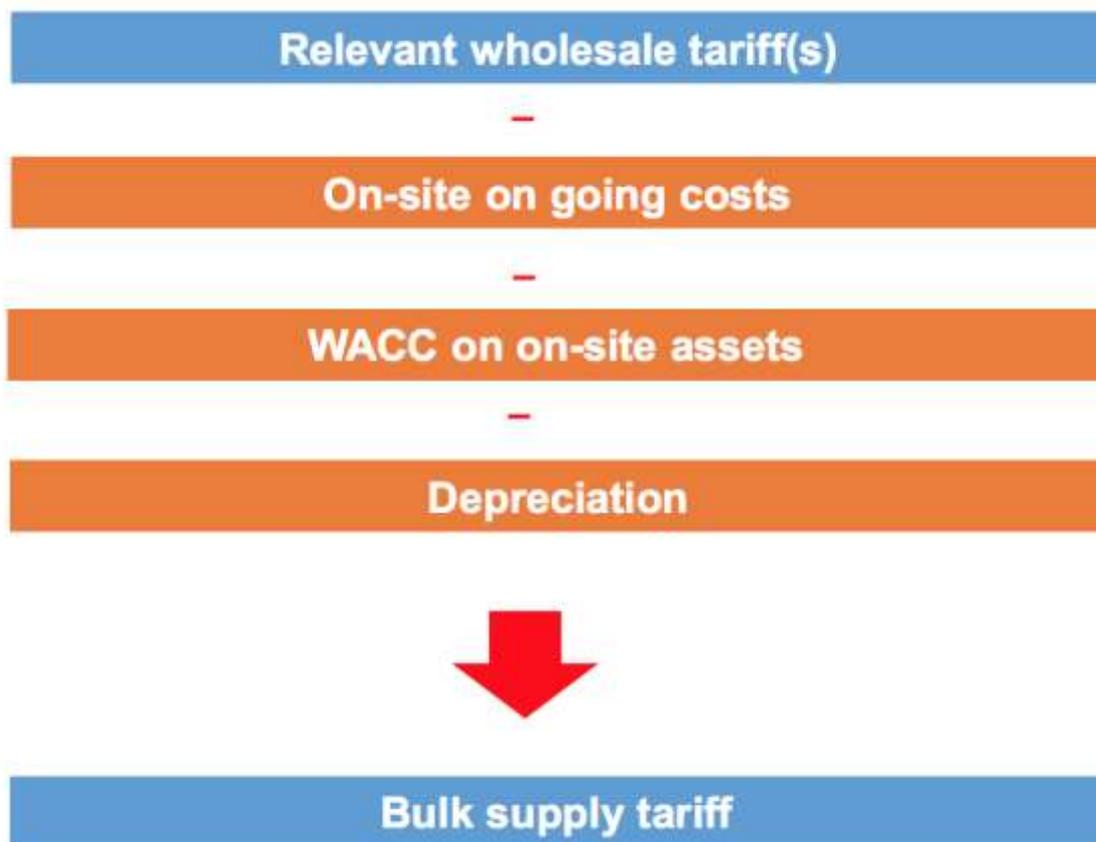
Ofwat's guidance specifies a "wholesale-minus" approach to setting bulk charges. This approach starts from the relevant wholesale tariff(s) and deducts costs that the incumbent water company would no longer incur as a result of the NAV replacing it as supplier.

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<sup>1</sup> Bulk charges for NAVs: final guidance, Ofwat, May 2018

Ofwat explain the four essential elements in this approach, which are shown in Figure 1 below.

**Figure 1. Relevant starting point for wholesale-minus approach and costs to be deducted**



Source : Ofwat - Bulk charges for NAVs: final guidance

## 2. Summary of our approach

In this section we describe the approach that we have taken to implementing Ofwat's guidance for setting bulk charges. This is intended to provide transparency and help NAVs, developers and other interested parties better understand our approach to calculating our bulk charges.

In developing our approach to bulk charges we have taken full account of Ofwat's charging guidance as well as our general obligations under competition law and in our Licence. Our approach necessarily depends on a number of assumptions. Where NAVs, or others, believe these assumptions are not appropriate or applicable in their particular case, we would welcome a discussion about how we adjust our approach to meet the particular circumstances of a site, while maintaining compliance with Ofwat's guidance and our competition law obligations to ensure a level playing field.

### 2.1 Water and wastewater bulk tariff methodology

For developing both our water and wastewater bulk tariffs we built separate cost allocation models to help us understand the costs we incur in serving different customers, and hence the costs that would be avoided if a NAV is appointed. The base data within both our water and wastewater models used to allocate our costs and calculate the avoided costs are derived from our annual regulatory accounts, our PR14 final determination and accounting separation data.

The models follow the four step approach set out in Ofwat's guidance. Below we describe our approach to each of the four steps.

#### 2.1.1 Relevant wholesale tariff

Our approach starts with the relevant wholesale water or wastewater tariff, from which we deduct avoided costs.

The relevant wholesale tariff is our published wholesale unit volume charge per cubic metre of water / wastewater. These tariffs are published in our 'Schedule of Primary Household Charges' in our 'Wholesale Statement of Principles and Charges'<sup>2</sup>. For simplicity we have used the household wholesale tariff which is lower than our standard non-household wholesale tariff. However, should any customer on the site be applicable for the large user tariff, a bespoke tariff will be provided, as described later.

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<sup>2</sup> <https://beta.southernwater.co.uk/media/2263/wholesale-statement-of-principles-and-charges-19-20.pdf>

The wholesale unit volume charge excludes any customer service and retail costs, which are included in our retail tariff. Therefore a 100% discount for all customer services, including the customer bad debt provision, has been provided.

Table 1, below, sets out the relevant wholesale charges for 2021-22.

**Table 1: Our Wholesale tariffs for 2021-22**

<b>MEASURED CHARGES</b>	<b>£</b>
<b>Measured water supplies</b>	1.487
Unit volume charge – per cubic metre	
<b>Sewerage services – measured water</b>	2.045
Unit volume charge – foul water drainage - cubic metre	

For sites which have non-household customers where our large user tariff (LUT) is applicable, we will provide a bespoke tariff based on the weighted average wholesale tariff. This would apply to retail customers within the NAV site using over 5ML per annum for water and 100ML per annum for wastewater.

The weighted average wholesale tariff would be calculated based on the following formulas:

Weighted Average Wholesale Tariff – Water

$$= \frac{[(V_{hh} * C_{hh}) + (V_5 * C_5 + F_5) + (V_{20} * C_{20} + F_{20}) + (V_{100} * C_{100} + F_{100})]}{[V_{hh} + V_5 + V_{20} + V_{100}]}$$

Weighted Average Wholesale Tariff – Wastewater

$$= \frac{[(V_{hh} * C_{hh}) + (V_{100} * C_{100} + F_{100})]}{[V_{hh} + V_{100}]}$$

Where C is the volumetric charge, V is the assumed consumption and F is the fixed charge associated with the large user tariff.

NAVs will be required to provide the number of on-site customers on each large user tariff and the annual forecast volumes at 31 March each year. This forecast will be used to calculate the weighted average wholesale tariff and the associated bespoke tariff for the upcoming year. We will also require the volumetric consumption for each customer on each large user tariff band on 31 March for the previous year. Should the actual volumes vary from the forecast by greater than 5% of the total billed large user volume, we reserve the right to apply a true-up adjustment.

## 2.1.2 On-site ongoing costs

The next step is to understand our ongoing on-site costs, to allow us to identify which costs would be avoided.

Using our cost allocation models and the information contained in our regulatory accounts, we are able to identify the annual operating costs associated with operating and maintaining our water distribution and sewer networks. Adding operational and asset data to the models enables us to estimate at a granular level where on the network costs are incurred. This provided us with on-going costs for different sizes of pipes in our network, including the costs associated with managing leakage from our water distribution network.

Engineering data was used to associate these different pipe sizes with the size of a development site expressed in terms of the number of properties. Using this information we were able to estimate the on-site costs that would be avoided in the event of a NAV supplying a particular site. These are the costs that are discounted from our relevant wholesale tariff.

Tables 2 and 4 below show the calculated water and wastewater avoided on-site ongoing costs for a range of NAV sizes and the network assumptions used in calculating these. The avoided leakage costs and assumptions are shown separately in Table 3.

**Table 2: Water avoided on-site ongoing cost discounts**

Water NAV Tariffs	% discount from Wholesale tariff	Basis of discount
<20 properties	0%	No identifiable avoided costs
20-50 Properties	3.6%	All supply and communication pipe and a proportion of 100mm distribution mains on-site ongoing costs avoided
50-250 properties	9.8%	All supply and communication pipe, all <100mm distribution mains and a small proportion of <250mm distribution mains on-site ongoing costs avoided
250-1000 properties	11.3%	All supply and communication pipe, all <100mm distribution mains and a large proportion of <250mm distribution mains on-site ongoing costs avoided
>1000 properties	12.4%	All supply and communication pipe, all <100mm distribution mains and a larger proportion of <250mm distribution mains on-site ongoing costs avoided

**Table 3: Water avoided on-site leakage cost discounts**

Water NAV tariff	% discount from Wholesale tariff	Basis of discount
<20 properties	0%	No discount
20-50 properties	0.8%	Proportion of ongoing leakage reduction costs in <100mm distribution mains and all supply and communication pipe leakage costs avoided
50-250 properties	2.4%	All leakage reduction costs in <100mm distribution mains, a small proportion of leakage reduction costs in >100m distribution mains and all supply and communication pipe leakage costs avoided
25-1000 properties	3.3%	All leakage reduction costs in <100mm distribution mains, a large proportion of leakage reduction costs in >100m pipes distribution mains and all supply and communication pipe leakage costs avoided
>1000 properties	4.0%	All leakage reduction costs in <100mm distribution mains, a larger proportion of leakage reduction costs in >100m distribution mains and all supply and communication pipe leakage costs avoided

**Table 4: Wastewater avoided on-site ongoing cost discounts**

No. NAV properties	% discount from wholesale tariff	Basis of discount
<20 properties	0%	No identifiable avoided costs
20-250 Properties	2.7%	A proportion of <150mm on-site ongoing costs avoided
250-1000	8.7%	All <150mm sewer and a proportion of <225mm sewer on-site ongoing costs avoided
>1000	9.2%	All <225mm sewers and a proportion of 225m-375mm sewer ongoing costs avoided

### 2.1.3 WACC on on-site assets

Ofwat's guidance next requires us to consider any avoided financing costs associated with on-site assets.

We have considered the extent to which other financing costs would be avoided in the event of a NAV providing services to a new development in place of the incumbent provider.

Typically, for new development sites, the developer will either install the local network themselves or requisition it from the incumbent water company. In the case where the developer lays the network, these assets are adopted by the incumbent at nil cost, so in this instance there would be no avoided financing costs, since these costs are borne by the developer not the incumbent.

Where assets are requisitioned from the incumbent water company by the developer, the developer will typically pay for the costs of these, through an 'income offset' – a discount which recognises the value of future income from the new properties connected. To the extent that the developer does not pay the full cost of the assets provided as a result of the income offset, these costs would be incurred by the water company and hence may be avoided if a NAV were to serve the site. However, in order to ensure a level playing field between incumbents and NAVs, Ofwat requires incumbents to make a payment equivalent to the value of the income offset to NAVs in these circumstances. This means that the costs incurred by the incumbent are the same in each case. That is, there are no further avoided financing costs, since the incumbent must finance the payment to the NAV.

However, we recognise that NAVs will have working capital requirements and have provided a discount for working capital costs within our bulk NAV tariffs.

This element of the water discount is calculated by assuming that the NAV bills its customers once every six months (in reality many customer are likely to be on direct debit and therefore billed monthly), and that Southern Water will invoice the NAV for the bulk water supply monthly. This results in an average three month working capital allowance. This allowance is provided at a cost of capital rate of 4.74%, significantly above the WACC incumbents are provided.

For wastewater, the working capital discount is calculated by assuming that the NAV bills its customers once every six months, and that Southern Water will invoice for the bulk discharge quarterly, as provided for in our standard bulk discharge agreement.

**Table 5: WACC Discount**

WACC Discount	% discount from bulk tariff	Basis of discount
Water	1.185%	Three month working capital allowance provided at a cost of capital rate of 4.74%
Wastewater	0.593%	One and half months working capital allowance provided at a cost of capital rate of 4.74%

The actual discount will vary with the size of the development as the discount is applied against the bulk tariff

## 2.1.4 Depreciation

The final element in Ofwat's guidance to be considered is depreciation.

Depreciation costs represent an accounting charge to allow for the ongoing maintenance of the water and wastewater networks in a steady state. These ongoing maintenance cost are avoided in respect of local networks owned by NAVs and should be deducted from the bulk charge to a NAV.

As described above, the RCV is a proxy for the value of our network and treatment assets. Our approach uses an allocation of the RCV across the value chain to apportion the annual depreciation charge to different elements of the network, enabling us to identify the relevant avoided costs.

Our starting point for this allocation of the RCV was the net modern equivalent asset values (NMEAV) for each part of the value chain, as provided in our regulatory accounts.

For water, this includes a split of the NMEAV by abstraction licenses, raw water abstraction, raw water transport, raw water storage, water treatment, local treated water distribution and trunk treated water distribution. For wastewater, it includes a split of the NMEAV by sewage collection, surface water and highway drainage, sewage treatment, and bioresources. To this base data we applied a further allocation of local network costs between different pipe sizes, to enable the identification of avoided local network costs.

Table 6 and 7 show the resulting allocation of RCV across the water and wastewater value chains.

**Table 6: Water RCV allocation**

Water Treatment	Water - Distribution Network (mains size:>300mm)	Water - Distribution Network (mains size:<300mm & >250mm)	Water - Distribution Network (mains size: <250mm & >100mm)	Water - Distribution Network (mains size: <100mm)
6%	31%	1%	25%	36%

**Table 7: Wastewater RCV allocation**

Sewerage secondary network <150mm	Sewerage primary network >150mm - 225mm	Sewerage secondary network >225mm - 375mm	Sewerage secondary network >375mm	Surface water drainage	Highway drainage	Sewage treatment & disposal
35%	27%	6%	7%	10%	5%	10%

We then allocate our total depreciation costs for water and wastewater based on this RCV allocation. Tables 8 and 9 below show the calculated avoided depreciation costs and the network assumptions used in calculating these.

**Table 8: Water avoided depreciation costs**

Water NAV Tariffs	% discount from Wholesale tariff	Basis of discount
<20 properties	0%	No identifiable avoided costs
20-50 Properties	1.7%	All supply and communication pipe and a proportion of 100mm distribution mains on-site ongoing costs avoided
50-250 properties	4.6%	All supply and communication pipe, all <100mm distribution mains and a small proportion of <250mm distribution mains on-site ongoing costs avoided
250-1000 properties	5.4%	All supply and communication pipe, all <100mm distribution mains and a large proportion of <250mm distribution mains on-site ongoing costs avoided
>1000 properties	6.0%	All supply and communication pipe, all <100mm distribution mains and a larger proportion of <250mm distribution mains on-site ongoing costs avoided

**Table 9: Wastewater avoided depreciation costs**

Wastewater NAV Tariffs	% discount from Wholesale tariff	Basis of discount
<20 properties		No identifiable avoided costs
20-250 Properties	1.5%	A proportion of <150mm on-site ongoing costs avoided
250-1000	5.5%	All <150mm sewer and a proportion of <225mm sewer on-site ongoing costs avoided
>1000	5.9%	All <225mm sewers and a proportion of 225m-375mm sewer ongoing costs avoided

## 2.2 Total discounts for each size of NAV site

Having considered each of the three elements of avoided cost identified in Ofwat's charging guidance, we further considered whether there were additional costs that would be avoided and which should therefore be discounted from our NAV bulk charges. We did not identify any further costs that would be avoided. The total discount included within our NAV bulk charges therefore represents the sum of the elements set out above.

Tables 10 and 11 below show the total discounts for each size of NAV site, defined by the number of properties on the NAV site. These discounts are expressed relative to the starting point of our calculations, the relevant wholesale volumetric charge.

**Table 10: Total water bulk charges discounts**

<b>Water NAV Tariffs</b>	<b>% discount from Wholesale tariff</b>
<20 properties	0%
20-50 Properties	7.3%
50-250 properties	17.8%
250-1000 properties	20.9%
>1000 properties	23.4%

**Table 11: Total wastewater bulk charges discounts**

<b>Wastewater NAV Tariffs</b>	<b>% discount from Wholesale tariff</b>
<20 properties	0%
20-250 Properties	4.7%
250-1000	14.7%
>1000	15.7%

## 2.3 Additional information

Where there is a large user on the site we would calculate a bespoke tariff as described in section 2.1.1, reflecting the reduction in the starting point of the weighted average wholesale tariff. Where the large user tariff is applied to the weighted average wholesale tariff, both the relevant fixed and a volumetric charges would apply as per our Charges Scheme.

It is possible for the largest sites, that there may be instances where the standard NAV bulk tariff is greater than the large user tariff. In line with Ofwat's guidance published in January 2021, the standard methodology would be applied to ensure the discount is cost reflective and that incumbents' customers do not bear unjustified additional costs.

The above stated NAV tariffs relate to bulk service charges. It does not contain any new connection service charges which may be required by the NAV and which can be found in our published new connection charging document.

Where we provide a discount for on-site pumping stations, this will be calculated on a bespoke basis for the avoided costs based on the technical specification of the pump.

## 3. Compliance with Ofwat guidance and competition law

In developing our approach to bulk supply charges we have taken full account of Ofwat's charging guidance as well as our general obligations under competition law and in our Licence. We believe that we are fully compliant with the charging guidance, competition law and our Licence. We have undertaken independent third party assurance of our charges in order to ensure we are giving NAVs a fair discount and that they can operate on a level playing field.

The base data within both our water and wastewater models used to allocate our costs and calculate the avoided costs are derived from our annual regulatory accounts, our PR14 final determination and accounting separation data. Our models have been subject to independent assurance by a third party to ensure that the calculations in the models are working correctly and the underlying assumptions used are reasonable. Further, they have been assured for compliance of our NAV charges with Ofwat's guidance.

Note: The charges for 2021-22 are not currently calculated on the basis of a bottom up approach outlined in Ofwat's guidance published January 2021. However, it is our intention to apply this methodology for 2022-23 charges in line with Ofwat's acknowledgement that changes may not be fully implemented until future charging years. Please note, we believe this methodology is likely to reduce the discount offered to NAVs from 2022-23.

### 3.1 WaterUK Best Practice Principles

In order to provide clarity in pricing methodology, approach and publication, WaterUK developed and published best practice principles for pricing information transparency.

Based on the findings of the NAV Market – Behavioural improvements project recommendations report, the following principles were recommended and adopted by Southern Water when setting the tariffs for the year 2020-21 as described below:

**Principle 1 - NAVs should be able to independently calculate an indicative bulk charge (fixed and volumetric) for the majority of sites, where on-site assets are fully funded by the developer.**

The Southern Water NAV bulk charges are simple and transparent and provide a volumetric charge, allowing new appointees to calculate an accurate bulk charge. Where the site



contains customers on a large user tariff, the new appointees are able to calculate an indicative charge by using the weighted average wholesale charge formula provided in section 2.1.1.

**Principle 2 - Incumbents should maintain a dedicated NAV page on their websites, with all relevant information contained there or clearly signposted.**

Southern Water maintain a dedicated NAV page on the website, containing the NAV bulk charges, methodology and other relevant information.

**Principle 3 - NAV bulk charges schemes should contain worked examples to make clear how charges are calculated.**

The NAV bulk charges scheme for 2021-22 contains worked examples.

**Principle 4 - Incumbents should inform NAVs when new bulk charges are published and consult with NAVs when they make substantive changes to the 'minus' element of their bulk charges.**

New appointees are informed when the NAV bulk charges are published through Business Channels and will be consulted on any substantive changes.

**Principle 5 - Incumbents should make efforts to provide clarity on where their new connections charging arrangements for NAVs differ to developers and Self-lay providers.**

New connection charges are based on the service received rather than the type of customer, with any specific charges are highlighted within the charging arrangements. For instance an SLP that is undertaking the design work itself would pay a lower application fee than one which required Southern Water to undertake the design, reflecting the difference in the scope of services provided.

**Principle 6 - NAV charges should be presented in a table format, with volumetric rates in £/m<sup>3</sup> and fixed charges in £s.**

The NAV bulk charges are published in a table format, with volumetric rates shown in £/m<sup>3</sup>.

**Principle 7 – Incumbents should publish their NAV bulk charges alongside wholesale charges, other than in exceptional circumstances.**

The NAV bulk charges scheme is published at the same time as our wholesale charges.

# Appendix 1: Schedule of NAV bulk charges 2021-22

## New Appointment Bulk Charges

### Schedule of Newly Appointed Variation charges 2021-22

Charges are shown exclusive of VAT

<b>MEASURED CHARGES £</b>	
<b>Measured water supplies</b>	
Unit volume charge - per cubic metre (<20 properties)	<b>£1.487</b>
Bulk supply charges >20 properties	
(i) Band 1 (20 to 50 properties)	<b>£1.379</b>
(ii) Band 2 (50 to 250 properties)	<b>£1.222</b>
(iii) Band 3 (250 to 1000 properties)	<b>£1.176</b>
(iv) Band 4 (>1000 properties)	<b>£1.139</b>

<b>MEASURED CHARGES £</b>	
<b>Sewerage services</b>	
Unit volume charge – foul water drainage - cubic metre (<20 properties)	<b>£2.045</b>
Bulk discharge charges >20 properties	
(i) Band 1 (20-250 properties)	<b>£1.948</b>
(ii) Band 2 (250-1000 properties)	<b>£1.744</b>
(iii) Band 3 (>1000 properties)	<b>£1.725</b>

The tariff band will be based on the number of properties served within the charging period.

If there are any large users within the newly appointed variation please contact us directly.

This addendum to the Statement of Principles and Charges is published by Southern Water Services Limited as wholesale supplier and shall come into operation from 1 April 2021 to 31 March 2022 inclusive.

## Appendix 2: Worked example

In these charges we have attempted to provide NAV bulk charges which are predictable to allow New Appointees to confidently price for a site, whilst also providing a cost reflective charge, ensuring that any avoided costs are fully discounted from the wholesale charge. This results in several standard tariff bands applicable for different sized developments, with bespoke tariffs offered in cases where a large user tariff is applicable to an on-site customer.

To further provide transparency and explain the charges we have provided worked examples below:

### Example 1 – Water Supply to 210 mixed household/non-household customers

In cases of a development in which there are no large user tariff customers the standard banded tariffs apply. For instance, for a development with 200 household properties and 10 non-household properties below the large user tariff, a banded tariff for 210 properties would be appropriate, resulting in a NAV bulk tariff £1.222 /m3.

Customer Type	No. Properties	Tariff	Est. Consumption*	Charge per year
Household	200	£1.222/m3	20,000 m3	£24,440
Non-household	10	£1.222/m3	1,000 m3	£1,222
LUT	0	n/a	n/a	n/a
Total	210	£1.222/m3	21,000	£25,662

\*Estimate based on assumed water consumption of 100m3 per property

## Example 2 – Wastewater Services to 1000 household customers and one LUT customer

In cases where the large user tariff is applicable to an on-site customer, a bespoke tariff will be provided based on the weighted average wholesale tariff. For instance, a wastewater site with 1000 household properties (with an estimated total discharge of 100,000 m<sup>3</sup>) and one customer discharging 150 MI per annum (receiving the large user tariff) would result in a weighted average wholesale charge of £1.932/m<sup>3</sup>, calculated in accordance with the methodology explained in section 2.1.1

Household Wholesale Tariff (Chh) = £2.045

$$= \frac{[(V_{hh} * Chh) + (V_{100} * C_{100} + F_{100})]}{[V_{hh} + V_{100}]}$$

$$= \frac{[(100,000 \text{ m}^3 * £2.045) + (150,000 \text{ m}^3 * £1.478 + £56,700)]}{[100,000 \text{ m}^3 + 150,000 \text{ m}^3]}$$

Weighted Average Relevant Wholesale Tariff = £1.932/m<sup>3</sup>

We use the large user consumption to calculate an equivalent property band discount. In this case, the 150MI large user is equivalent to the use of 1,500 properties, plus the 1000 customer properties, meaning we would apply our >1000 properties tariff band for the discount.

Application of the NAV discount (15.7% for 1000+ property band) against the weighted average wholesale tariff, results in a **bespoke NAV bulk tariff of £1.628/m<sup>3</sup>\*\***.

Customer Type	No. Properties	Relevant Wholesale Tariff	NAV discount	Bespoke Tariff
Bespoke	>1000	£1.932/m <sup>3</sup>	15.7%	1.628/m <sup>3</sup>

\*\* The bespoke bulk tariff (£1.628) appears greater than the wastewater large user volumetric tariff (£1.478) but in reality the bespoke bulk tariff is less than the effective large user tariff which would include a large user fixed charge of £56,700.