



Bulk Supply Charging
Arrangements
**for New Appointments
& Variations (NAVs)**

2023-24

**Document revision history**

Version	Changes made	Date
1	Annual review of published changing arrangements related to NAV bulk supply charges.	28 February 2023



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Contact us

Our developer services team can be contacted on:

Website seswater.co.uk
 Email developerservices@seswater.co.uk
 Phone 01737 772000
 Monday to Thursday: 8:30am to 3:00pm
 Twitter @SESWater
 Address SES Water
 London Road, Redhill
 RH1 1LJ



1. Introduction

1.1. Welcome

Welcome to our Bulk Supply Charging Arrangements for New Appointments and Variations (NAVs) document for 2023/24.

This document is aimed at developers and prospective NAVs who may be interested in operating in the SES area and NAVs who are looking to develop sites in the SES area.

Our Charging Arrangements document contains:

- all of the information you need to understand how SES calculates the bulk supply charges for NAVs requesting a bulk supply of water based on the wholesale minus approach
- the resulting standard bulk supply charges applicable to NAVs for Charging Year 2023/24
- all the information you need to understand where to find additional information on how to become a NAV in our region
- two worked examples of the calculation of NAV bulk supply charges to aid understanding.

Additional supporting materials can be found on our NAVs' webpage:

<https://seswater.co.uk/developers/new-connections/services-to-navs>. More specifically:

- process on how to become a NAV and apply for an individual site
- [bulk Supply Agreement](#) template
- [2023/24 Developer Services Charging Arrangements](#).

All charges are exclusive of VAT and any other taxes that may be applicable.

While this methodology and the information in this document has been developed to meet most expected NAV site applications, it is recognised there could be sites that have materially different operating characteristics or that incur costs we have not considered in our cost build-up of avoided costs. SES will therefore review each NAV bulk supply application before finalising any Bulk Supply Agreement, and where the site differs significantly from our standard assumptions, we will investigate if the calculation of the bulk supply charges needs to be adjusted on a case-by-case basis.

The NAV bulk supply charges in this document will apply from 1 April 2023 to 31 March 2024.

1.2. How do I use this document?

We have structured this document to facilitate the navigation between various sections of the document.



Each item on the Contents page is a clickable link that brings you directly to the section of the document you click on.

We have also included clickable links within the document where we refer the reader to other sections of the document – this is to reduce the amount of repetition and to facilitate usability of the document. References to specific figures or tables within the document are also clickable links. For ease of reference, clickable links are underlined, in bold font and highlighted in [teal](#).

References to external documents are also [clickable links](#) and are in blue font and underlined.

If you are already familiar with our bulk supply charges methodology and are mainly interested in our [list of charges](#), please refer to [Section 4](#) for a summary of our standard bulk supply charges for 2023/24.

1.3. What has changed?

Key changes applicable from 1 April 2022

We have made the following changes for Charging Year 2023/24:

- We updated the calculation of our charges to reflect the most current published data on costs from our 2021/22 Annual Performance Report (inflated to 2023/24 prices).
- We expanded on our description of our application of the wholesale minus approach to assist the user of this document in understanding our methodology and how charges are calculated.
- We captured more explicitly the avoided cost for capital maintenance for on-site mains.
- We introduced an additional allowance to reflect wholesale operating risks to which NAVs are exposed.
- We updated our allowance for leakage.

1.4. We want to hear your views

We are committed to engaging with our customers on an ongoing basis. We welcome your views on our Charging Arrangements at any point in time throughout the Charging Year.

As a result of the feedback, we have received in the past year, we are now more committed than ever to engage with our customers and help promote effective markets.

We invited stakeholders to provide their view and feedback on:

- our approach to calculating avoided costs
- our proposal to expand the set of avoided costs captured in our approach



- our proposal to consider a margin to compensate for the change in the income offset rule
- our proposal to use a wider benchmark for leakage
- ways to improve our charging document

We keep a log of all the feedback we receive, either through formal consultations or spontaneous feedback we receive during the year. Depending on the type of feedback we receive, we might be able to address it during the Charging Year while other feedback may be addressed in the following iteration of our NAV bulk supply charges.

We will update these Charging Arrangements at least once a year and welcome any feedback at any point so that we can reflect on it in future updates and improve our service to you.

If you would like to register an interest to take part in our next consultation(s), please contact us at developerservices@seswater.co.uk.



2. Our charges development process

Every year we follow a rigorous process to review and update our bulk supply charges for NAVs. We also stand ready to make any changes to our bulk supply charges throughout the Charging Year to respond to new circumstances, where they arise.

This section describes the rules and principles we follow when developing and updating our charges.

2.1. The rules and principles our charges are based on

New Appointments and Variations (NAVs) were introduced under the Water Industry Act 1991 to provide a mechanism to facilitate new entrants into the water and wastewater sector:

- A new appointment is made where a limited company is appointed by the Water Services Regulation Authority (Ofwat) to provide water and/or wastewater services for a specific geographical area.
- A variation is where an existing appointed company requests Ofwat to vary its appointment to extend the area it serves.

The qualifying criteria Ofwat uses when making determinations on bulk supply agreements between an incumbent water company and a NAV are:

- the unserved criterion – the site is not connected to the water and/or sewerage infrastructure of an existing water company
- the consent criterion – an existing water company consents to the application
- the large user criterion – the premises comprising the site use at least 50ML in any year in England or 250ML in Wales and the customer(s) consent(s)

Ofwat can appoint a new company to serve a site if one of these three criteria is met.

Ofwat conducted a review of the NAV market and consulted in November 2017 on proposals for a new approach to calculating the bulk supply charges incumbent water companies charge NAVs. It published its final guidance on bulk charges provided to NAVs in England and Wales in May 2018. Since then, Ofwat has consulted again on its approach to regulating bulk supply charges for new appointees in July 2020, followed by another consultation on revising its guidance on the bulk supply or discharge charges paid by new appointees in November 2020. These consultations culminated in Ofwat publishing a set of conclusions and next steps as well as its final guidance for bulk charges in January 2021.

Our bulk supply charges are produced in accordance with the '[Bulk charges for new appointees – guidance on our approach and expectations](#)' published by Ofwat in January 2021.

The guidance sets out:

- Ofwat's approach to determining bulk charges in the case that incumbents and new appointees are unable to agree the price of a bulk supply or discharge agreement



- the expected behaviours Ofwat wants to see from incumbents as they consider how to apply the Ofwat guidance when developing and publishing their bulk charges for new appointees.

In its updated [guidance](#), Ofwat sets out the expected behaviours it wants to see from incumbents. At high-level, these are:

- incumbents should actively consider how to **support markets** on an ongoing basis, including the NAVs market
- applying the wholesale minus approach when developing bulk supply charges whilst ensuring cost estimation approaches capture relevant costs and are **cost reflective**
- considering the potential impacts on **environmental outcomes**, e.g., avoided cost components of charges not to be applied per volume of water supplied if the volume of water is not the driver of costs
- publishing bulk charges that are **transparent, accessible and up to date**; the information provided should allow prospective new appointees to confidently estimate their bulk charges when seeking to serve new sites
- publish a **menu of charges** so that new appointees are able to calculate their bulk charges based on the actual mix and quantity of properties supplied on site
- adopt **best practice** in producing charging information and publishing their bulk charges, including explanations of the calculation methodologies and assumptions used
- adjust bulk charges to ensure that they remain cost reflective; published charges should be **updated at least on an annual basis**, not least to reflect updates to wholesale charges but also to amend charges to new circumstances as soon as is practical

In Section 6 we explain how our NAV Bulk Supply Charging Arrangements are consistent with the Ofwat [Bulk charges for new appointees – guidance on our approach and expectations](#) published by Ofwat in January 2021.

2.2. The development process we follow

We engage with stakeholders and consider their views carefully

SES Water is committed to working in an open, collaborative and transparent way including our emerging thinking when seeking to make improvements within our offering to all customer types.

Developer Services customers, new appointees and stakeholders have a direct role to play in our proposed approach and service offerings. We recognise they should be involved in informed discussions and collaborative working with the ultimate aim of gaining practical support to enable us to meet the demands in growth, as house building intensifies across our region. Engagement with these stakeholders will be regular and proactive over 2023/24, taking the form of one-to-one meetings and half yearly customer online forums.



We review and update our charges on an annual basis

On an annual basis (as a minimum), we review the way we calculate and structure our charges to assess cost-reflectivity using our externally assured model that calculates our bulk supply charges. Based on any Ofwat policy changes (where applicable), feedback we receive throughout the year and as part of our stakeholder consultation, we revisit our methodologies and cost allocations and update our model to ensure our charges remain fair, relevant and in line with the industry expectations.

In summary, we calculated the avoided costs by identifying a list of cost categories related to assets or activities undertaken on-site for a new development (and are therefore avoidable). We did this by reference to Table 4J from the Annual Performance Report, which includes treated water distribution costs which are not adjusted to identify only the on-site costs (the 'last mile'). We then used SES finance cost centre classifications and operational developer services knowledge and experience to adjust Table 4J costs to identify on-site costs. We divide the costs considered to be avoidable by the total length of mains to obtain the avoided cost discount per metre of mains.

As part of this exercise, we looked at all our costs and updated our assumptions to ensure avoided costs are captured accurately as part of our calculations.

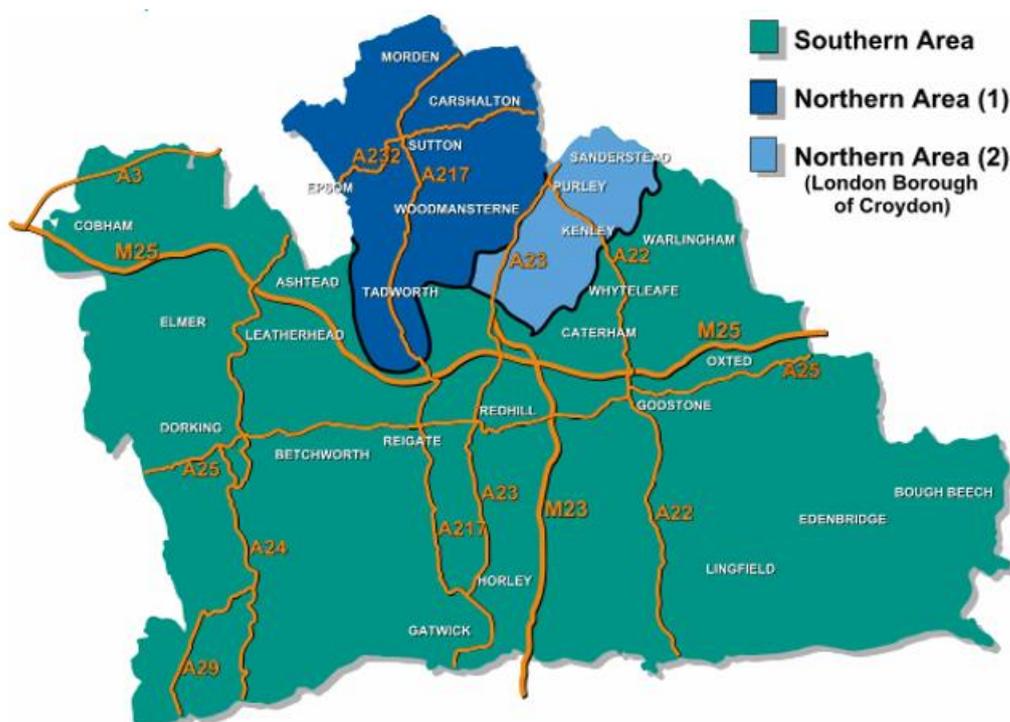
As part of the process, we followed to develop our NAV Bulk Supply Charges, we engaged with some members of the senior management team throughout the process to get their input and used this as an opportunity to challenge our thinking and approach. This process gives us the confidence our Bulk Supply Charges are set in a fair, transparent and cost-reflective way and are consistent with the [Ofwat guidance](#). See [Section 6](#) for more details.



3. Our application of the wholesale minus approach

NAV bulk supply charges are based on the applicable charges for wholesale services. These charges for wholesale services vary by charging area within SES. The company has three charging areas – Southern, Northern (1) and Northern (2). These charging areas can be seen on the area map below. For the purposes of calculating NAV bulk supply charges the two Northern charging areas can be regarded as one, as the measured charges are the same for each Northern area.

Figure 3.1: Area Map of SES Water Supply Area



The relevant wholesale charges that apply for the calculation of NAV bulk supply charges for the Northern and Southern charging areas are shown in [Table 3.1](#) below.

3.1. Introduction

In developing our bulk supply charges for NAVs, we have used Ofwat's 'wholesale minus' approach. The wholesale minus approach consists of four building blocks:

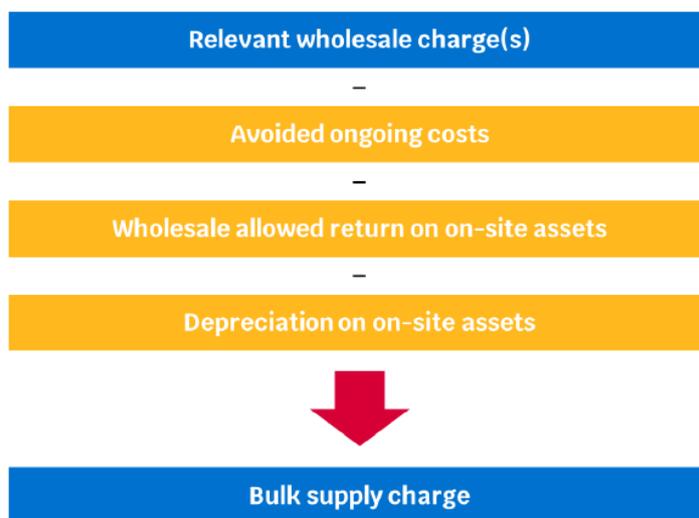
- the relevant starting point, i.e., the wholesale charges from which to deduct the relevant costs
- the avoided ongoing costs that are deducted from the relevant starting point
- the wholesale allowed return for on-site assets that is deducted from the relevant starting point
- the depreciation of on-site assets, that is also deducted from the relevant starting point



These deductions represent the costs the incumbent water company is no longer expected to incur if a NAV were to supply the new development instead.

A diagrammatic illustration of the wholesale minus approach taken from the Ofwat guidance is shown in [Figure 3.2](#) below.

Figure 3.2: Relevant starting point for wholesale-minus approach and costs to be deducted



Source: *Bulk charges for new appointees – guidance on our approach and expectations* (Ofwat, January 2021)

From 1 April 2021 Ofwat introduced new charging rules for new connections which has changed the treatment of the income offset such that this is now applied to the infrastructure charge rather than the requisition cost of the new development. The result of this is that the developer pays for the full amount of the on-site assets. The implication of this change in the charging rules for new connections is that there is no increase in the incumbent's RCV for new developments and therefore no deduction from the WACC or depreciation from on-site assets needs to be made.

In [Sections 3.2](#) and [3.3](#) below, we describe our methodology to calculate the bulk supply charges.

This process can be summarised as follows:

- Prior to the commencement of the Charging Year, the NAV provides a forecast of the average number of households and non-households on its site as well as their average annual consumption.
- We then calculate the wholesale charges (i.e., the relevant starting point) for the Charging Year.
- Based on the wholesale-minus approach, we deduct the avoided ongoing costs from the relevant starting point and make adjustments to account for leakage and an additional allowance to reflect the operating risk borne by the NAV.
- We calculate the bulk supply charges applicable to the NAV.
- At the end of the Charging Year, SES will undertake a reconciliation and settlement process. See [Section 5.1](#) for more details.



3.2. How we determine the relevant starting point

Based on the Ofwat guidance the relevant starting point in calculating the NAV bulk supply charges is the appropriate wholesale charges that reflects the NAV's end-customer base. A summary of SES wholesale charges is set out in [Table 3.1](#) below.

A full list of SES charges can be found in the [SES Wholesale Charges Schedule](#).

Table 3.1: Summary of SES water wholesale charges

Wholesale charges	Unit	Northern	Southern
Household (measured)			
<i>Annual standing charge</i>	£/connection	24.15	24.15
<i>Volume charge</i>	£/m ³	1.18	1.51
Household (unmeasured)			
<i>Assessed - Single occupancy</i>	£/connection	112.51	112.51
<i>Assessed - Multi occupancy</i>	£/connection	151.55	151.55
Non-household (measured)			
Annual standing charge			
<i>Standard (<10MI per year)</i>	£/connection	1.14	1.14
<i>Mid user (10 – 49MI per year)</i>	£/connection	1,063.01	1,547.30
<i>High user (>50MI per year)</i>	£/connection	3,507.22	4,783.99
Volume charge			
<i>Standard (<10MI per year)</i>	£/m ³	1.17	1.50
<i>Mid user (10 – 49 MI per year)</i>	£/m ³	1.03	1.32
<i>High user (>50MI per year)</i>	£/m ³	0.98	1.26

Based on our published wholesale charges and information on the number of properties and expected consumption volumes by type of consumer at a NAV site, we calculate an aggregated standing charge and a weighted average volumetric charge to use as the starting point for the bulk supply charge calculation. For the worked examples presented in [Appendix A](#), we have used the following illustrative annual consumption volume assumptions:

- 100 m³ per measured household
- 200 m³ per non-household standard tariff user

These assumptions will be reviewed based on site-specific information provided by the NAV. Each bulk supply charge is therefore bespoke and site-specific, taking account of the number and type of consumers and consumption volumes on-site. In advance of the Charging Year the NAV would provide the forecast information necessary to calculate the relevant starting point to be used for billing during the year. At the end of the Charging Year,



the NAV would provide the actual outturn information for the purposes of the retrospective “true-up”. See [Section 5](#) below for further details on the true-up process.

3.3. How we calculate the avoided costs

According to Ofwat’s latest guidance, the avoided costs that should be deducted from the relevant starting point should comprise avoided ongoing on-site operational costs, which includes both direct and indirect costs. As noted, no deduction is required for depreciation of on-site assets or a wholesale allowed return on on-site assets. We also make further provisions to reflect leakage and NAVs’ exposure to operating risks.

In essence these avoided costs and other deductions we apply to the relevant starting point are captured in [Figure 3.3](#) below. We describe our approach to calculating these deductions in the sub-sections that follow.

Figure 3.3: Avoided ongoing costs/deductions

Deductions £			
<p><u>Avoided ongoing direct costs</u></p> <ul style="list-style-type: none"> • Operating costs <ul style="list-style-type: none"> ○ Manpower, etc. • Maintenance costs <ul style="list-style-type: none"> ○ Materials ○ Consumables ○ Manpower, etc. 	<p><u>Avoided ongoing indirect costs</u></p> <ul style="list-style-type: none"> • Overheads <ul style="list-style-type: none"> ○ Non-operational buildings ○ Procurement ○ Economic regulation ○ Etc. 	<p><u>Leakage adjustment</u></p> <ul style="list-style-type: none"> • Allowance to reflect the water loss between the boundary of the NAV site to the premises on site. 	<p><u>Additional allowance</u></p> <ul style="list-style-type: none"> • Allowance to reflect wholesale operating risks to which it is exposed

3.3.1. Avoided ongoing costs

The deductions for on-site ongoing costs relate to the costs of operating and maintaining on-site assets that are avoided by the incumbent and reflect the activities that the NAV is expected to perform on-site.

The latest Ofwat guidance identifies the types of avoided ongoing costs it would expect incumbents to capture in their wholesale minus approach. These are:

- direct costs of operating and maintaining on-site assets considering all costs incurred over the lifetime of the asset
- indirect costs, such as overheads

We have captured these categories of costs in our calculation of avoided ongoing costs.

As part of the deductions to be applied to the relevant starting point, we also make an adjustment for leakage, as described further below.

Avoided ongoing costs



The approach used to calculate avoided costs is consistent with what Ofwat describes as a middle-down approach¹. Ofwat has expressed its preference for companies to adopt a bottom-up approach² when estimating avoided costs as this is likely to result in more cost-reflective bulk supply charges. We have started the process of thinking about how a bottom-up methodology may be implemented. As acknowledged by Ofwat this process will take some time to implement and therefore we were not in position to adopt a bottom-up approach at this point in time. We also believe it is important there is consistency across the industry in the way a bottom-up approach is constructed, and we will continue to work and engage with the rest of industry on developing this approach.

To determine the avoided operating costs, we first identified a list of cost categories related to assets or activities undertaken on-site for a new development (and that are therefore avoidable). Ofwat's guidance states that these operating costs should be those of the incumbent. Therefore, we did this by reference to cost centre classifications used in SES finance systems to prepare the Annual Performance Report (Table 4J).

We set out below the cost categories and activities assumed to take place on-site.

Table 3.2: List of avoided direct cost categories

Cost centre	Type of activities included
Air valves	<i>Install, repair and renew</i>
Chamber and pits	<i>Consolidate, renew and rebuild</i>
Meters – customers	<i>Install, repair leak, re-site and renew</i>
Meter chambers – customer	<i>Repair and renew cover and section</i>
Communication pipe	<i>Locate, repair leaks and renew</i>
Fire hydrants	<i>Install, repair and renew</i>
Ferrule/maincock	<i>Repair and cap off</i>
Networks	<i>Proportion of costs associated with control room</i>
Principal stop cock	<i>Locate, repair leaks, re-site and renew</i>
Principal stop cock box	<i>Dig out and renew</i>
Leakage detection	<i>Detect leak, site visit, sounding</i>
Mains overhead recovery	<i>Capital salaries recharge</i>
Inspectors general duties	<i>Sampling, inspection, rezoning</i>

Based on this classification we calculate the proportion of treated water distribution direct operating costs that are considered avoidable based on the most recent available historical cost data (in this case, 2021/22 cost data, inflated to 2023/24 prices).

¹ which uses company-level data for different activities identified as avoided and allocating them to the on-site network.

² which uses specific estimates of typical costs incurred for different activities identified as avoided.



In addition to the avoided direct operating costs, we have also included an allowance for avoidable indirect operating costs (e.g., overheads, scientific services and regulatory compliance costs), in line with Ofwat's latest [guidance](#). We assume that indirect costs for total treated water distribution are allocated to avoided activities in the same proportion as direct operating costs. This is a relatively straightforward, generally accepted and transparent way of allocating those costs that cannot be traced back to a particular activity.

The sum of avoided direct and indirect costs gives us an overall proportion of treated water distribution operating costs that are avoidable. To determine avoided costs for the current charging year, we apply this proportion to forecast treated water distribution operating costs, excluding power and local authority rates, to calculate total avoided operating costs for the charging year.³ We exclude power from this calculation as power costs relate to water pumping which is unlikely to occur on site. However, should a NAV site have unusual operating characteristics, e.g., requires booster pumps, we will consider this as a bespoke avoided cost.

We derive an avoided cost per meter of network by dividing total avoided costs by forecast length of mains and multiplying this by the assumed length of mains per connection on a NAV site. We assume a standard length of mains per connection on a NAV site of 8.5m derived from operational information for new development sites on SES network.

These on-site avoided costs are calculated on a per property connected basis as the on-site costs are more likely to vary by the number of connections rather than the amount of water delivered. It also provides more incentive to NAVs to encourage efficient water usage on their site thus resulting in environmental benefits.

The avoided on-site costs include costs related to operation, maintenance and monitoring of assets on an ongoing basis but also, in the long-run, the cost of replacing the on-site assets over time. One way of capturing these replacement costs is by considering a future profile of expenditure related to asset replacement and considering the equivalent annuity that would compensate the NAV for these costs. This is akin to treating this expenditure as capital costs.

Another way of accounting for these costs is by treating the annual ongoing expenditure on asset replacement as opex. In SES accounts, the costs related to replacing assets such as meters and communication pipes are expensed so these costs are largely already reflected in the direct operating costs listed above as avoidable. However, the costs related to capital maintenance for on-site mains are not captured in the middle-down approach we have applied.

We have therefore applied a bottom-up approach to calculate the avoided capital maintenance costs for mains based on SES costs by considering the equivalent annuity that would compensate the NAV for these costs. The calculation assumes that, if SES was to operate the site, it would incur a capital cost for replacing on-site mains at the end of their asset life. This cost would accrue to SES' RCV and would be repaid through depreciation

³ The forecast operating costs refer to "Other operating expenditure excluding renewals" (row 7) for treated water distribution in Table 4D.



and a return on investment. For the calculation of the return element, we applied an adjusted WACC in line with Ofwat's 2018 guidance on bulk supply charges. The adjusted WACC is based on the PR19 allowed WACC adjusted to account for the different operational risks faced by a NAV site as follows:

- Notional gearing of 50 per cent
- 15 basis points uplift to PR19 asset beta
- Tax rate of 10 per cent to calculate a pre-tax WACC

These adjustments result in an adjusted pre-tax WACC of 4.22 per cent. The avoided capital maintenance cost is calculated as an equivalent annual annuity value, per connection, that corresponds to the net present value of the capital maintenance cost over the lifetime of the NAV site.

The calculated avoided operational and capital maintenance costs for 2022/23 per NAV property connected is presented in [Table 3.3](#) below.

Table 3.3: Avoided cost for 2023/24

Avoided cost	£/NAV property connection
Direct and indirect operational cost	20.98
Capital maintenance costs for on-site mains	0.39
Total onsite avoided costs	21.37

Costs that have been excluded from our bulk supply charges

As mentioned in the sub-section above, we have only included the operational costs that would be avoided by the incumbent that reflect the activities that a NAV would perform on-site instead.

For the avoidance of doubt, we have excluded costs that would not be reflected in our bulk supply charges, such as:

- costs recovered from developers
- off-site costs that are not avoided
- retail costs

Leakage

The deductions for avoided on-site costs also include an allowance for leakage as recommended in the latest Ofwat guidance. The leakage allowance is to reflect the water loss between the boundary of the NAV site (after bulk supply meter) to the premises on site (before the end-customer meter). Costs related to leakage detection and management are also relevant and these are captured in the calculation of avoided ongoing operating costs.

Our leakage adjustment assumption is presented in [Table 3.4](#) below. As we do not currently have any NAV sites operating in our region and therefore no actual NAV site operational data to use, the leakage adjustment is based on the average of leakage rates reported in the current Water Resource Management Plans of selected NAVs.



Table 3.4: Leakage assumption for 2023/24

Leakage assumption	%
On-site leakage rate	4.9%

We apply the leakage allowance by reducing the weighted average volumetric wholesale charge for the site.

We recognise that the allowance should reflect the leakage that we would have incurred had we been operating the site instead of the NAV. This means that ideally, information on leakage occurring on the SES network should be used to set the leakage allowance. Overall leakage rates for our network will be influenced by a range of factors including pipe size, material, age, soil type and topography. Leakage rates on sections of the network that are not relevant for a NAV site may be very different from those on parts of the network that more closely resemble the characteristics of a NAV site. Therefore, we believe that the NAVs assessment of leakage is likely to be a more accurate representation, and thus more cost-reflective, of the leakage expected to occur on a newly developed NAV site than using simple assumptions on the average leakage of the SES network.

We will continue to review the information available and consider alternative ways in which we can use information from our monitoring of leakages on our network to derive an expected level of leakage for a newly developed NAV site. Should additional information on leakage becomes available throughout the year, we may revisit our leakage assumption for the purposes of setting our bulk supply charges for NAVs.

3.3.2. Depreciation and allowed return on on-site assets

The Ofwat guidance identifies the weighted average cost of capital (WACC) and the depreciation from the on-site assets (e.g., installation of on-site mains) as additional costs to be deducted from the wholesale tariff. The Ofwat guidance says this should be applied to the Regulatory Capital Value (RCV) relating to the on-site assets that the incumbent would incur.

Before April 2020, for new development sites where the developer requisitions the on-site assets from the incumbent, the developer would incur the costs of installing the assets less any 'income offset'. The income offset is a discount to the developers for the cost of installing the on-site assets to reflect future income to the incumbent from the newly connected properties. This discount or 'income offset' would be incurred by the incumbent and result in an increase in their RCV.

From 1 April 2021 Ofwat introduced new charging rules for new connections which has changed the treatment of the income offset such that this is now applied to the infrastructure charge rather than the requisition cost of the new development. The result of this is that the developer pays for the full amount of the on-site assets.

The implication of this change in the charging rules for new connections is that there is no increase in the incumbent's RCV for new developments and therefore no deduction from the WACC or depreciation from on-site assets needs to be made.



3.3.3. Additional allowance

Ofwat's 2021 [guidance](#) states that companies may apply an additional allowance that "reflect[s] the operational risk experienced by new appointees which an incumbent has avoided". On the basis that the wholesale allowed return on on-site assets to be deducted from the relevant wholesale charge(s) is no longer relevant given the changes to the income offset rules, we consider that an additional allowance could be included to reflect the wholesale operating risks to which a NAV is exposed.

To inform the level of the additional allowance, we considered a wide range of evidence.

[Ofwat's 2018 guidance](#) discussed the two main features which affect the risk profile for a NAV compared to the incumbent company and which justified applying an adjusted rate of return:

- Lower degree of regulatory protection offered to the NAV; and
- Different risk profile of new development services compared to the risk faced by the incumbent's overall business.

We agree that these are two elements will affect the operational risk faced by a NAV and we believe that an additional allowance should compensate the NAV for these risks that are not directly captured in the avoided ongoing costs.

Ofwat's latest guidance does not provide an indication of the level of the additional allowance that should be applied. There is, however, a range of evidence that can potentially be relied on to determine a reasonable allowance, for example:

- the 2.5 per cent margin that was set to foster competition at the opening of the non-household retail market
- the 1 per cent water retail margin; and
- the 4 per cent margin set by Ofgem for electricity connections that DNOs must charge on contestable services to create headroom for new entrants.⁴

[Ofwat's 2018 guidance](#) may also offer some additional useful evidence. Ofwat estimated the difference in the required WACC driven by the different level of regulatory protection incumbents enjoy compared to NAVs. Based on its calculation, Ofwat considered that the adjusted WACC that should be applied to the calculation of bulk supply charges for NAVs should be 77 basis points (bps) higher than the PR14 WACC.⁵

Applying the same modifications to the PR19 WACC (i.e., notional gearing of 50 per cent, uplift to asset beta, tax rate of 10 per cent, gives an adjusted vanilla WACC of 3.91 per cent real, compared to the 2.96 per cent WACC set by Ofwat for incumbent companies at PR19. This means that the adjustment to the PR19 WACC reflecting the higher risks faced by NAVs would be equal to 95bps (0.95 per cent).

⁴ <https://www.ofgem.gov.uk/ofgem-publications/87259/guideelectricitydistributionconnectionsolicy.pdf>

⁵ Page 33. <https://www.ofwat.gov.uk/wp-content/uploads/2018/05/Bulk-charges-for-NAVs-final-guidance.pdf>



Based on the relative scale of the RCV (on which the WACC is applied) and allowed revenues, a WACC increment of 0.95 per cent is broadly equivalent to an increment of 3-4 per cent on allowed revenue. This suggests that the upper range for an additional allowance could be around 3-4 per cent, which is consistent with Ofgem’s margin for electricity connections that DNOs must charge on contestable services.

Based on Ofwat’s guidance, the above evidence and our understanding of operational risks associated with delivering water services to new sites, we consider that it is reasonable to introduce an additional allowance – applied as a discount on the relevant starting point – to reflect the operational risk experienced by NAVs in operating on-site assets. However, we think it is prudent to introduce a margin in the lower range given:

- this is a new addition and that some companies still make no provision for these additional risks; and
- that the water retail margin is the most relevant benchmark.

Table 3.5: Additional allowance assumption for 2022/23

Additional allowance	%
Additional allowance to reflect the higher operational risk experienced by NAVs	1.0%

The need for, and the level of the margin will be revisited in the future in the context of any changes to the methodology used to calculate bulk supply charges.



4. Our NAV bulk supply charges for 2023/24

Our NAV bulk supply charges consist of two parts:

- Charges for the volumetric consumption, equal to the weighted average of our standard published volumetric wholesale charges for the type of consumers present on the NAV site, after applying the percentage reduction for leakage and the additional margin allowance.
- A negative fixed charge reflecting our published standing charges for the type of consumers present on the NAV site after the deduction of the avoided costs per property connected on a NAV site and the additional margin allowance.

Table 4.1 shows our wholesale charges (as per **Table 3.1** above).

Table 4.1: Summary of SES water wholesale charges

Wholesale tariffs	Unit	Northern	Southern
Household (measured)			
<i>Fixed charge</i>	£/connection	24.15	24.15
<i>Volumetric charge</i>	£/m ³	1.18	1.51
Household (unmeasured)			
<i>Assessed - Single occupancy</i>	£/connection	112.51	112.51
<i>Assessed - Multi occupancy</i>	£/connection	151.55	151.55
Non-household			
Fixed charge			
<i>Standard (<10MI per year)</i>	£/year	1.14	1.14
<i>Mid user (10 - 49MI per year)</i>	£/year	1063.01	1547.30
<i>High user (>50MI per year)</i>	£/year	3507.21	4783.99
Volumetric charge			
<i>Standard (<10MI per year)</i>	£	1.17	1.50
<i>Mid user (10 – 49 MI per year)</i>	£	1.03	1.32
<i>High user (>50MI per year)</i>	£	0.98	1.26



Table 4.2 below shows the deductions for on-site costs used to set the NAV bulk supply charge.

Table 4.2: Summary of deductions applicable to standard household and non-household wholesale charges

Deductions	Unit	Northern	Southern
Deductions applied to all wholesale charges			
<i>Additional margin allowance</i>	%	1.0%	1.0%
Deductions applied to volumetric wholesale charges			
<i>Leakage</i>	%	4.9%	4.9%
Deduction applied to wholesale standing charges			
<i>Total on-site avoided costs</i>	£/connection	21.37	21.37

You will also need a water meter device. See Additional one-off costs for the options available to you.



5. Updating the NAV bulk supply charges

This document will be updated annually (as a minimum) to reflect the latest wholesale charges and costing information from the business plan, regulatory accounts and other financial and non-financial sources to calculate the relevant avoided costs to deduct from the wholesale charges.

5.1. Reconciliation and settlement process

The bulk supply charge for each NAV site is site-specific and calculated each year based on our published wholesale charges adjusted in accordance with the Ofwat ‘wholesale minus’ approach and the methodology detailed in Section 3.

As charges are calculated in advance of the Charging Year, they will be based on forecast information such as the mix and number of customers and consumption volumes on the NAV site.

At the end of the charging year the actual number of connections and consumption volumes will be collected (from the NAV and the bulk supply meter). If there is a material difference (± 2.5 per cent) in the calculation of the NAV bulk supply charge from these revised volumes, then a revised bill will be issued to reflect this change.

This true-up process will only take place if the change in the bulk supply charge calculated based on outturn information is greater than a materiality threshold of 2.5 per cent (up or down) compared to the charge set at the start of the year.

For large forecast volumes it will be important to get reliable volume forecasts to prevent material changes to the NAV charge in the year-end ‘true-up’ of actual volumes.

5.2. Next steps

Going forward, Ofwat expects incumbents to strongly consider the use of a bottom-up approach⁶ for the calculation of avoided ongoing costs. Although our approach to calculating avoided ongoing costs for 2023/24 is based on what Ofwat would describe as a middle-down approach and is more granular than a full top-down approach, we acknowledge there is scope for further granularity and refinement going forward.

We have been reviewing the information that would be needed for a bottom up methodology and look forward to working with Ofwat and other incumbents in the proposed Ofwat working group to refine our approach and consistency of how the bottom up cost estimations should be applied.

⁶ Deemed more cost-reflective and uses specific estimates of typical costs incurred for different on-site activities in contrast to less accurate top-down approaches that use company-level data to derive unit costs for last-mile infrastructure. Bottom-up approaches can make use of regional averages of different activities for simplicity and transparency and do not necessarily need to be calculated on a site-specific basis.



As such, in the future we will do our best to collect the data required to facilitate a bottom-up avoided costs approach to be consulted on for the 2024/2025 NAV Bulk Supply Charging Arrangements. In parallel with our internal work on the data collation, we will keep our stakeholders up to date on the progression of our work. This will be a topic of discussion during our stakeholder engagement throughout 2023 and beyond.



6. Consistency with Ofwat guidance

In developing our approach to calculating bulk supply charges for NAVs we have taken account of Ofwat's bulk supply charging guidance and other applicable regulation and legislation. In calculating the bulk supply charges, we have used the latest wholesale charges information, the PR19 final determination and the latest available accounting separation and operational information to calculate the avoided costs.

In this table we explain how our NAV Bulk Supply Charging Arrangements are consistent with the Ofwat [Bulk charges for new appointees – guidance on our approach and expectations](#) published by Ofwat in January 2021.

Guidance/ expected behaviour	How we are consistent?
<p>3. Expected behaviours</p> <ul style="list-style-type: none"> “[...] incumbents should be actively considering how to support markets on an ongoing basis, including the new appointments and variations market.” 	<ul style="list-style-type: none"> We issued a stakeholder consultation in November 2021 and invited stakeholders to comments on our proposed changes to our NAV Bulk Supply Charging Arrangements for 2022/23. We have had some one-to-one engagement with NAVs and plan to continue engaging with NAVs going forward. We have published key information relevant to prospective NAVs on our website. Our Bulk Supply Agreement has also been published.
<p>3.1 Applying the wholesale minus approach</p> <ul style="list-style-type: none"> “[...] apply the wholesale minus approach set out in section 2 of this guidance when developing their bulk charges for new appointees. This includes the starting point accurately reflecting the characteristics of individual sites.” “Incumbents should ensure their approaches to cost estimation are cost reflective and only include relevant avoided costs. When estimating their avoided costs, incumbents should carefully consider which costs are relevant, using industry best practice where appropriate.” 	<ul style="list-style-type: none"> We have continued using the wholesale minus approach to calculate our bulk supply charges. The starting point is selected based on the characteristics of NAV sites. Relevant costs have been captured using the middle-down approach (see Table 3.2 above). In selecting the relevant costs, we considered the list of avoided costs that are common to most sites served by NAVs developed by CEPA in 2020. This includes treated water distribution direct operating costs as well as an allowance for avoidable indirect operating costs. Avoided costs also capture capital maintenance. The cost drivers we apply are the number of properties connected and the length of mains.
<p>Environmental incentives</p> <ul style="list-style-type: none"> “When structuring their bulk charges for new appointees, incumbents should consider potential impacts on environmental outcomes. In particular: 	



Guidance/ expected behaviour	How we are consistent?
<ul style="list-style-type: none"> <i>Bulk charges should not financially penalise new appointees for promoting greater water efficiency; in particular, the avoided cost components of charges should not be applied per volume of water supplied if the volume of water supplied is not the driver of costs.</i> <i>The calculation of avoided costs should seek to take account of the characteristics of the site on the incumbent's costs.</i> <i>“Ways in which incumbents might address these issues could include one or more of the following:</i> <ul style="list-style-type: none"> <i>bulk charges that are wholly or substantially based on the volume supplied (with no fixed element or standing charge)</i> <i>where the avoided costs element is calculated through the use of assumed consumption levels per property</i> <i>that reflect the extent to which surface water drainage costs would be incurred if there are sustainable drainage systems and/or other systems to mitigate surface drainage, on the site</i> <i>where per capita consumption is sustained at low levels (for example as a result of grey water recycling or rainwater harvesting on the site), whether additional avoided costs should be taken into account, for example relating to additional water resources.”</i> 	<ul style="list-style-type: none"> On-site avoided costs are calculated on a per property connected basis as the on-site costs are more likely to vary by the number of connections rather than the amount of water delivered. NAV specific data is used, where supplied by the NAV, to take account of NAV specific characteristics. Our bulk charges are substantially based on the volume of water supplied and a small standing charge applies.
<p>Publishing bulk charges</p> <ul style="list-style-type: none"> <i>“Incumbents should publish bulk charges so that they are transparent, accessible and up to date. The information should allow prospective new appointees to confidently estimate their bulk charges when seeking to serve new sites.”</i> <i>“When applying the wholesale minus approach, in practice incumbents should publish a ‘menu’ of charges so that new appointees are able to calculate their bulk charges based on the actual mix and quantity of properties supplied on a site.”</i> <i>“The type and scope of bulk services required by new appointees will vary depending on its approach and the circumstances of a site. In some rare cases, certain sites may require bespoke charges or variations to elements of the standard charge, and this should be noted in the incumbent’s bulk charges publications.”</i> <i>“We expect incumbents to adopt best practice in producing charging information</i> 	<ul style="list-style-type: none"> Our Charging Arrangements describe our approach to calculating our bulk charges, including a description of our methodology to calculate avoided costs. We have also published a list of avoided costs captured in our calculation. We have also provided two worked examples to help the users of this document understand how charges are calculated and provide them with the information they need to estimate their bulk charges. In producing our bulk charges for 2023/24, we have used the latest cost centre classification used in SES finance systems to prepare the APR. The relevant starting point captures a menu of wholesale charges.



Guidance/ expected behaviour	How we are consistent?
<p><i>and publishing their bulk charges, including explanations of the calculation methodologies and assumptions used. Incumbents should provide the means for prospective new appointees to independently estimate their charges for example through the use of quality-assured tariff calculators and/or worked examples.”</i></p>	<ul style="list-style-type: none"> • Our Charging Arrangements state that bespoke charges may apply depending on the characteristics of a NAV. • We have explained the rationale for introducing an additional allowance to reflect operating risk of a NAV.
<p>Updating bulk charges</p> <ul style="list-style-type: none"> • “[...] adjust their bulk charges to ensure that they remain cost reflective. Published charges should be updated on at least an annual basis, not least to reflect updates to wholesale charges. We expect incumbents to take the initiative and tailor their bulk charges to new circumstances as soon as is practical.” • “It would be good practice for incumbents to review their existing bulk agreements to reflect changes to this guidance.” 	<ul style="list-style-type: none"> • We have updated our charges for Charging Year 2023/24 and may update them during the Charging Year to reflect new circumstances, where applicable. • We have now published our Bulk Supply Agreement which is in line with the Ofwat guidance.



Appendix A Worked examples

The following examples has been developed to assist NAVs in understanding and calculating their bulk supply charges.

A.1. Worked example 1 – Southern region

The tables below provide a detailed worked example of a NAV bulk supply charge in the SESW Southern region based on the following on-site characteristics:

- Household connections = 200
- Non-household connections (standard user) = 10
- Household consumption = 20,000 m³ (100 m³ per household)
- Non-household consumption (standard user) = 2,000 m³ (200 m³ per non-household)
- Total consumption volume = 22,000 m³
- Bulk metered volume = 23,061 m³ (assuming that 4.6 per cent of bulk supply volume is lost between the bulk supply meter and end consumer meters).

Table A.1: Worked example: standard mixed development site – Southern region

Fixed wholesale charges	No of connections	Unit rate (£/connection)	Charge (£)
<i>Household</i>	200	24.15	4,830.41
<i>Non-household</i>	10	1.14	11.39
A. Total wholesale fixed charge			4,841.80
Volumetric wholesale charges	No of units (m3)	Unit rate (£/m3)	Charge (£)
<i>Household</i>	20000	1.51	30,234.71
<i>Non-household</i>	2000	1.50	3,009.25
<i>Weighted average volumetric rate</i>		1.51	
B. Total wholesale volumetric charge			33,243.96
Deductions - avoided costs	No of connections	Unit rate	Charge (£)
<i>Avoided operating costs</i>	210	-£ 21.37	- 4,487.70
<i>Additional allowance (A+B) x 1%</i>		1.0%	- 380.86
C. Sum of deductions - avoided costs			- 4,868.56
D. NAV site fixed charge after deductions (A + C)			- 26.76
Deductions - leakage	No of units (m3)	Unit rate	Charge (£)
<i>Leakage rate</i>		4.9%	
<i>Weighted volumetric charge adjusted for leakage</i>	23134	£ 1.44	33,243.96
E. NAV site volumetric charge adjusted for leakage			33,243.96
Bulk Supply Charge (D + E)			33,217.20



A.2. Worked example 2 – Northern region

The tables below provide a detailed worked example of a NAV bulk supply charge in the SESW Northern region based on the following on-site characteristics:

- Household connections = 500
- Non-household connections (standard) = 80
- Non-household connections (high user) = 1
- Household consumption = 50,000 m³ (100 m³ per household)
- Non-household consumption (standard) = 16,000 m³ (200 m³ per non-household)
- Non-household consumption (high user) = 10,000 m³ (10,000 m³ per non-household)
- Total consumption volume = 76,000 m³
- Bulk metered volume = 79,665 m³ (assuming that 4.6% of bulk supply volume is lost between the bulk supply meter and end consumer meters).

Table A.2: Worked example: standard mixed development site with large user – Northern region

Fixed wholesale tariffs	No of properties	Unit rate (£/connection)	Charge (£)
<i>Household</i>	500	24.15	12,076.03
<i>Non-household (standard user)</i>	80	1.14	91.10
<i>Non-household (high user)</i>	1	3507.21	3,507.21
A. Total wholesale fixed charge			15,674.34
Volumetric wholesale tariffs	No of units (m3)	Unit rate (£/m3)	Charge (£)
<i>Household</i>	50000	1.18	58,921.97
<i>Non-household (standard user)</i>	16000	1.17	18,773.17
<i>Non-household (high user)</i>	10000	0.98	9,814.33
<i>Weighted average volumetric rate</i>		1.15	
B. Total wholesale volumetric charge			87,509.47
Deductions - avoided costs	No of properties	Unit rate	Charge (£)
<i>Avoided operating costs</i>	581	-£ 21.37	- 12,415.97
<i>Additional allowance (A+B) x 1%</i>		1.0%	- 1,031.84
C. Sum of deductions - avoided costs			- 13,447.81
D. NAV site fixed charge after deductions (A + C)			2,226.54
Deductions - leakage	No of units (m3)	Unit rate	Charge (£)
<i>Leakage rate</i>		4.9%	
<i>Weighted volumetric charge adjusted for leakage</i>	79916	£ 1.10	87,509.47
E. NAV site volumetric charge adjusted for leakage			87,509.47
Bulk Supply Charge (D + E)			89,736.00



Appendix B Additional one-off costs

You will also need to purchase a water meter device. You have the option to purchase it from SES or directly from the supplier.

Our supply-only charges for water meter devices are captured in the table below.

Table B.1: Our fixed charges for the supply of water meter devices

Meter type	Unit	Fee (£)
15mm AMR meter ^{NC}	£/meter	58.60
15mm external boundary meter ^{NC}	£/meter	18.81
20/25mm AMR meter ^{NC}	£/meter	71.06
40mm AMR meter ^{NC}	£/meter	150.48
50mm external boundary meter ^{NC}	£/meter	81.51

C = Contestable

NC = Non-contestable

All charges are exclusive of VAT



Appendix C Definitions

Term	Description
Act	The Water Industry Act 1991 as amended from time to time.
Billing Year	A calendar year running from 1 April in a given year to 31 March in the following year.
Bulk Agreements	The collective name for Bulk Supply Agreements between the relevant NAV and SES Water.
Bulk Supply Agreement	An agreement for bulk supply of water to the site, entered into by the relevant NAV and SES Water.
Charges Scheme Rules	The Charges Scheme Rules issued by the Water Services Regulation Authority under sections 143(6A) and 143B of the Water Industry Act 1991.
Charging Arrangements	This document which outlines the approach to charging for bulk supply charges and the methodologies for calculating those, applied by us in accordance with the Ofwat guidance.
Charging Year	A calendar year running from 1 April in a given year to 31 March in the following year.
Company	SES Water
Developer	Any person or business which is responsible for a Development.
Development	Premises on which there are buildings, or on which there will be buildings when proposals made by any person for the erection of any buildings are carried out, and which require connection with, and/or modification of, existing water or sewerage infrastructure.
Domestic premises	Any premises used wholly or partly as a dwelling or intended for such use.
Domestic purposes	As defined in The Water Industry Act 1991.
Existing main	Main that was in operation before development commenced.
Fixed Charges	Charges set for a given Charging Year which are fixed in amount or which are calculated by reference to a predetermined methodology set out in the undertaker's Charging Arrangements, the application of which allows calculation at the outset of the total amount owing in that Charging Year in respect of the charges in question. Such charges are to be fixed for a Charging Year, as defined above.
House	Any building or part of a building that is occupied as a private dwelling house or which, if unoccupied, is likely to be so occupied and, accordingly, includes a flat.
Income offset	A discounted sum of money offset against the infrastructure charges that would otherwise be applied in recognition of revenue likely to be received by the Water Undertaker in future years for the provision of supplies of water to premises connected to the new water main.



Term	Description
Infrastructure Charge	The charges described in section 146(2) of the Water Industry Act 1991. That is, a charge paid by the developer to the water company when a property is connected to the company's water supply for the first time which contributes to wider network reinforcement to meet the increased demand arising from the new connections.
Measured Water Supply	A supply through a water meter
NAV	New appointment and variations provide water and/or sewerage services to customers in an area previously served by the incumbent monopoly provider. A new appointment is made when Ofwat appoints a company for the first time to provide services for specific geographic area. A variation is where an existing appointment is varied to extend the areas served.
Network reinforcement	Refers to work other than Site Specific Work, as defined below, to provide or modify such other: <ul style="list-style-type: none"> i. Water Mains and such tanks, service reservoirs and pumping stations, or ii. Sewers and such pumping stations as is necessary in consequence of the Site Specific installation or connection of Water Mains, Service Pipes, Public Sewers and Lateral Drains.
New appointee	Company holding an appointment as a relevant undertaker where the conditions of that appointment limit the charges that can be fixed under a charges scheme by reference to the charges fixed by one or more other relevant undertakers.
New Connection Services	The collective term for New Water Mains, New Sewers, Service Connections, Lateral Drains, Waste Connections and Diversions.
New Water Mains	A water main provided by us in accordance with our duties under section 41(1) of the Act.
Non-domestic purposes	For a service connection or new water main: <ul style="list-style-type: none"> a. the premises being connected to the water network do not consist in the whole or any part of a building; or b. the supply is for purposes other than domestic purposes.
On-site	Works carried out or proposed to be carried out within the site boundary.
Off-site	Works carried out or proposed to be carried out outside the site boundary.
Premises	A property, or parts of a property, which are intended to be separately occupied.



Term	Description
Site Specific	Work on, or the provision of, water or sewerage structures or facilities located on a development as well as work to provide and connect a requested water main, sewer, communication pipe or lateral drain on, to or in the immediate vicinity of, the development. Charges for site specific work relate to the provision of connection structures or facilities located on a development up to the nearest practical point on the existing network where the connecting pipework is of a nominal bore internal diameter no larger than that of our existing network. They do not refer to costs or work required as part of network reinforcement.
Undertaker	A water undertaker or sewerage undertaker.
Unmeasured Water Supply	A supply of water that is not metered.
Water main	Any pipe, not being a pipe for the time being vested in a person other than the Water Undertaker, which is used or to be used by a Water Undertaker or licensed water supplier for the purpose of making a general supply of water available to customers or potential customers of the Water Undertaker or water supply licensee, as distinct from for the purpose of providing a supply to particular customers. This definition includes tunnels or conduits which serve as a pipe and any accessories for the pipe.
Water Undertaker	A company appointed under the Water Industry Act 1991 to provide water services to a defined geographic area and which owns the supply system and other infrastructure.
Wholesalers	A company providing Wholesale Services to Retailers
Wholesale Services	All regulated activities related to the supply of water that are not Retail Activities. This includes the abstraction, treatment and transportation of water.