

# WWSL Bulk Charges for NAVs Method Statement

Wessex Water

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## Version history

Version number	Version name	Publication date
1.0	Indicative charges 2023-24	01/12/2022
1.1	Final charges 2023-24	01/02/2023
1.1	Final charges 2023-24 – calculator usability updates	24/02/2023
<b>2.0</b>	<b>Final charges 2024-25</b>	<b>01/02/2024</b>

## 1. About this document

- 1.1 This method statement sets out Wessex Water Services Limited’s approach to setting charges for New Appointments and Variations (NAVs). It relates to bulk supply and discharge agreements between incumbents and NAVs, not between incumbents.
- 1.2 This document has been developed with transparency in mind, to demonstrate how we have accounted for industry best practice and to provide assurance that our bulk charges remain cost reflective.
- 1.3 This method statement forms one of a number of documents that we publish with regard to Bulk Charges for NAVs, as summarised in **Figure 1.1: Charges publication documents:**

**Figure 1.1: Charges publication documents**

<u>Wholesale charges</u>	<u>Household charges</u>	<u>Bulk charges for NAVs</u>	<u>New connection services charges</u>
Wholesale charges scheme	Household charges scheme	Bulk charges for NAVs scheme	New connection services charges scheme
Wholesale charges Board assurance statement	Household charges scheme Board assurance statement	Bulk charges for NAVs Board assurance statement	New connection services charges Board assurance statement
Wholesale charges Statement of Significant Change	Household charges statement of significant changes	Bulk charges for NAVs method statement	New connection services Statement of Significant Change
		Bulk charges for NAVs calculator	New connection services charges calculator
			New connection services charges worked examples

- 1.4 Our final bulk tariffs are set out in the charges schedule published separately on our website<sup>12</sup>. At the same location, we have also published a charges calculator to allow potential NAVs to easily assess the likely charges they will incur. Appendix 2 provides an example of how the calculator may be used.
- 1.5 To request a copy of this or any of the bulk charges for NAVs documents, please contact us using the details below:

Email: [wholesale@wessexwater.co.uk](mailto:wholesale@wessexwater.co.uk)

Telephone: 0330 123 1122

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

<sup>1</sup> <https://corporate.wessexwater.co.uk/our-performance/our-charges>

<sup>2</sup> For completeness, we have also included our 2024-25 charges within this document

## 2. Introduction

- 2.1 The NAV market was established to enable developers and large business customers to choose their water and sewerage undertaker for a specific geographic area, typically one which has never previously been served by an incumbent.
- 2.2 We set bulk supply for NAV charges to cover the bulk supply or discharge agreements between incumbents and new appointees, using a wholesale minus approach. We review and publish bulk charges for new appointees at least annually, in line with the expectations set out in Ofwat's January 2021 revised guidance on bulk charges for new appointees<sup>3</sup>.
- 2.3 For our 2024-25 charges we have:
  - retained a wholesale minus approach to setting the tariff;
  - retained a more bottom-up calculation of avoided costs; and
  - increased the number of years of data we base our charges on

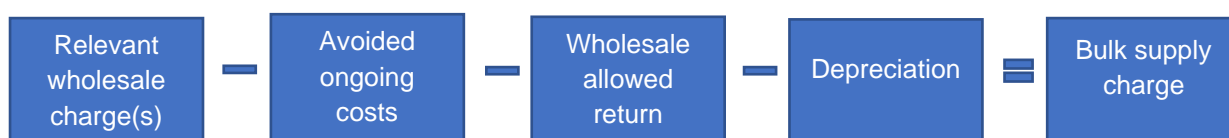
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<sup>3</sup> <https://www.ofwat.gov.uk/publication/bulk-charges-for-new-appointees-guidance-on-our-approach-and-expectations/>

### 3. Our wholesale minus approach

- 3.1 We use a wholesale minus approach for setting our bulk charges for NAVs, which is consistent with the latest Ofwat guidance<sup>4</sup> (January 2021).
- 3.2 This approach starts from the relevant wholesale tariff(s) and deducts costs that the incumbent would no longer incur if a new appointee supplied the site instead.
- 3.3 There are four essential elements in this approach:
- the wholesale charges or set of charges as the relevant starting point from which to deduct the relevant costs;
  - the ‘minus’ element which consists of the costs to be deducted from the relevant starting point. There are three categories of avoided costs that may apply:
    - ongoing costs;
    - a wholesale allowed return on on-site assets; and
    - depreciation on on-site assets”<sup>5</sup>.
- 3.4 The wholesale minus approach is summarised in Figure 3.1:

**Figure 3.1: The wholesale minus approach to bulk charges**



- 3.5 Each element is considered in turn. The following explanation of our approach is applicable to both water and wastewater services unless otherwise stated.

#### The relevant starting point

- 3.6 The relevant starting point is our wholesale charges that reflects the new appointee’s end customer base on the site.
- 3.7 This method statement takes as given our wholesale charges<sup>6</sup> as a data source for the calculation of bulk charges for NAVs. Our wholesale charges are calculated annually and are set to recover allowed revenue as determined through the five year price control process. Annual revenue allowances are adjusted to reflect in period determinations and are indexed to November CPIH inflation. Due to this regulatory process, the relevant wholesale starting point does move year on year.
- 3.8 We create an ‘overall weighted average’ tariff that reflects the combined measured wholesale charges (fixed and volumetric) of all the NAV’s customers on that site. This accounts for different types of end-customers, including households and non-households. We do this by using information on the number of households and non-households on the site and their consumption. As such, we also account for different discharge arrangements (foul, Surface Water Drainage (SWD) and Highway Drainage (HWD)) to inform the relevant starting point.

<sup>4</sup> [Bulk charges for new appointees – guidance on our approach and expectations \(ofwat.gov.uk\)](https://www.ofwat.gov.uk/guidance/bulk-charges-for-new-appointees/)

<sup>5</sup> [Bulk charges for new appointees – guidance on our approach and expectations \(ofwat.gov.uk\)](https://www.ofwat.gov.uk/guidance/bulk-charges-for-new-appointees/), p.9

<sup>6</sup> Further information on our wholesale charges and the assurance of them can be found on our website: [Our charges | Wessex Water](https://www.wessexwater.co.uk/our-charges/).

- 3.9 A final site-specific fixed charge is applied for water to recover the cost of the single bulk meter, based upon the total expected water consumption.
- 3.10 HWD is included in the relevant wholesale starting point charged to NAVs because it is a socialised cost of collecting and treating water that drains from the highways into our network.
- 3.11 The inclusion of SWD in the relevant starting point depends on the services that the NAV offers to its end customers. For example, if all properties on a site have sustainable drainage solutions, we would not expect this to be included in the bulk charges we set.
- 3.12 For the avoidance of doubt, retail costs (such as billing services and reading the meters of end customers) are not recovered by wholesale charges and are not included in the relevant starting point.
- 3.13 Competition costs refer to the upfront set up and ongoing operating costs we incur as an incumbent operating in the non-household retail market. These costs form part of our non-household wholesale charges and therefore form part of the wholesale starting point for our NAV charges, dependent on the number of non-household customers the NAV site serves.

### **Adjustment for Leakage**

- 3.14 We make a downward adjustment of 5.5% to the volume recorded at the bulk meter to account for any on-site leakage that might impact the effective price at the end-customers' meters. This deduction is applied directly to the recorded volume consumed on a NAV site.
- 3.15 This adjustment accounts for the long-run average volume of water that would have counterfactually leaked from the network beyond the bulk meter, had we been operating the network instead of a NAV.
- 3.16 To calculate the quantum of on-site leakage as a percentage of the total volume at the bulk meter, we have constructed a theoretical model using expert engineering knowledge that calculates the leakage in an area over 60 years. We created a notional local network with a demand forecast consistent with that made in our most recent Water Resources Management Plan (2019). Over a 60-year horizon, average consumption per domestic property reduces from 104m<sup>3</sup> per annum in 2020 to 93m<sup>3</sup> per annum in 2080.
- 3.17 At year zero, leakage is almost zero in the newly laid network. A deterioration function was then created which simulates the increase in leakage over time as the network deteriorates. This function is exponential, so over time leakage increases significantly. An intervention threshold of 50 litres per property per day (or circa 20% of billed volume) was chosen as the point at which a company would intervene to reduce leakage back to a reasonable level. As the network deteriorates, leakage increases faster, and exponentially more frequent interventions are required. The costs of these interventions are included, on an average basis, within our avoided cost calculation.
- 3.18 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.
- 3.19 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.

### **Relevant avoided costs**

3.20 We consider three categories of avoided costs (avoided ongoing costs, wholesale allowed return and depreciation) in turn below. The following explanation of our approach is applicable to both water and wastewater services unless otherwise stated.

3.21 We recognise the progress made by the Ofwat bulk charges working group (section 4) and have considered each item in the checklist developed by the avoided costs sub-group, as summarised in Appendix 1.

### **Avoided ongoing costs**

3.22 Avoided ongoing costs relate to the ongoing costs of operating and maintaining assets that we, as an incumbent, avoid in the NAV serving the site instead of ourselves.

3.23 We have considered the following costs:

- Direct operating costs
- Direct capital maintenance costs
- Central costs

### **Direct operating and direct capital maintenance costs**

3.24 We have considered the activities we do and the activities we would avoid if a NAV were to serve a site instead of ourselves. We have considered this on an activity by activity, bottom-up basis, with reference to the NAV checklist (Appendix 1) and our own experience of the activities and costs of serving a site. We have then identified the direct operating costs and direct capital maintenance costs of those activities from our accounting system.

3.25 Direct operating costs refers to expenditure avoided in the operating and monitoring of assets. Direct operating costs include but are not limited to labour costs, power, materials and consumables, Local Authority rates, and general and support costs.

3.26 Direct capital maintenance costs refers to expenditure on activities such as asset replacement and asset renewals required to maintain the network. Capital maintenance costs includes all infrastructure maintenance and replacement costs.

3.27 Our accounting system records the direct operating and direct capital maintenance costs to assets. Based on the costs identified, the relevant avoided direct costs have been allocated to one of the following asset areas:

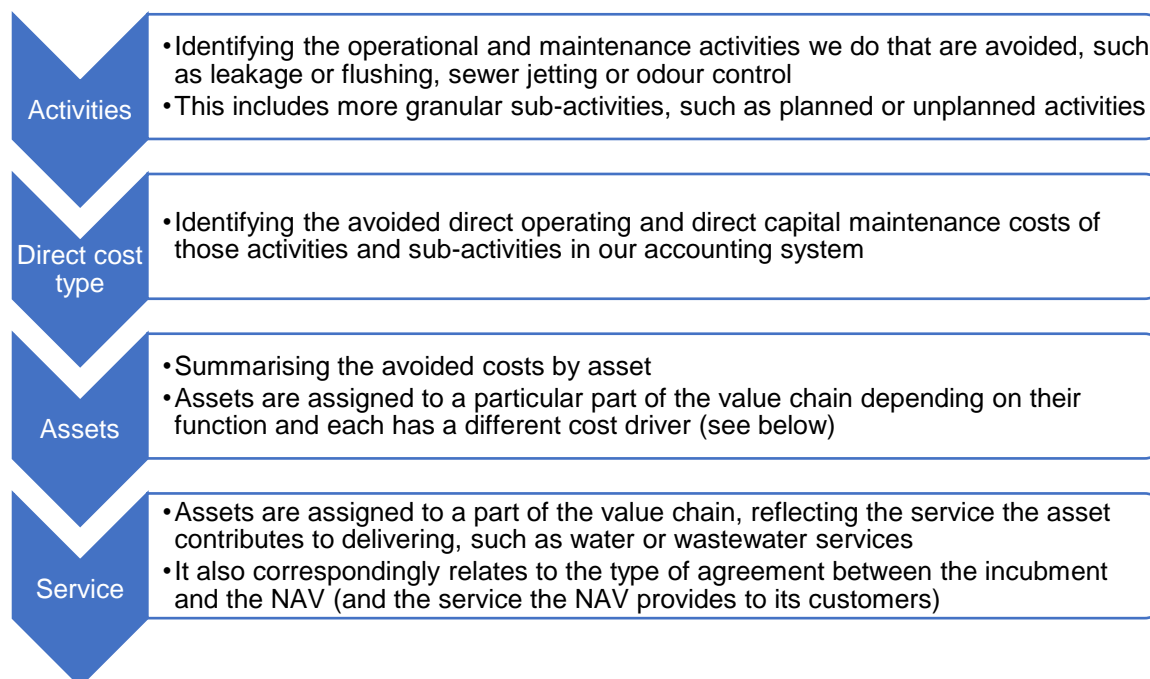
- Mains (water) / sewers (waste)
- Communication pipes
- Water meters
- Pumping stations (water / waste)

3.28 Within our account system and reflecting the structure of our business by function and service delivered, assets are assigned to a part of the value chain (e.g., a water pumping station is assigned to treated water distribution, which is part of wholesale network plus).



3.29 We summarise our approach to identifying and capturing the relevant avoided direct operating and direct capital maintenance costs in Figure 3.2.

**Figure 3.2: Cost structure within which we have considered the relevant avoided direct costs**



3.30 We have used a 5-year average of cost information for direct operating costs and direct capital maintenance costs to inform the avoided ongoing costs.

3.31 We recognise that the level, timing and profile of direct capital maintenance costs varies over the lifetime of the asset. We have not considered it proportionate to consider capital maintenance costs on a net present value, asset by asset, basis. Instead, we have considered the direct capital maintenance costs we incur in maintaining our asset stock (e.g., pumping stations), a stock which is made up assets of different ages and taken a five year average (2018-19 to 2022-23) of this to smooth any uneven spend profiling.

3.32 Within the relevant avoided costs for wastewater, we include all costs associated with HWD and SWD such as clearing and maintaining drainage areas and de-silting. When we undertake these types of activities, it is difficult to attribute whether, for example, the de-silting activity was due to foul, SWD or HWD in the network or the appropriate mix of services these activities contribute to.

### Central costs

3.33 We have considered and identified the relevant avoided central costs, with reference to the NAV checklist (Appendix 1) and our own experience. We do not typically avoid any costs associated with central functions as a result of a new site being added to our network because the costs do not normally directly correlate to levels of activity. For example, we do not initially avoid any FTE costs associated with central HR, legal or finance functions if one NAV were to operate a new site instead of ourselves because the change is generally marginal, however we would avoid costs if a significant number of sites were to be taken on by NAVs.

3.34 We acknowledge that Ofwat's guidance suggests we should include the notional incremental central cost increase that we would observe if a significant number of sites were to be taken

on by NAVs, scaled to a single NAV site (and therefore scaled to relevant cost drivers). We have therefore included a top-down allocation of overheads (again based on a five-year average of cost information). Appendix 1 summarises the central costs, with reference to the checklist, that we have included.

- 3.35 We note in the checklist<sup>7</sup> that business rates are included both as a checklist column and centrally avoided cost (C17). We reflect any avoided business rate costs in the central costs considered.
- 3.36 All central costs have been allocated pro-rata to direct operating and capital maintenance costs and included in the direct operating and direct capital maintenance costs summarised in Table 3.2.

### Cost drivers

- 3.37 Based on the above approach, we have identified the total costs by asset listed in paragraph 3.27 we incur based on a five-year average for activities we consider relevant for a new development site.
- 3.38 We have further identified a set of cost drivers to scale the total costs by asset to give a view of the level of avoided costs at a site. We have considered the most relevant cost driver for each asset type as set out in Table 3.1.

**Table 3.1: Cost drivers considered and used, water and waste**

<b>Category</b>	<b>Breakdown</b>			
<b>Asset area</b>	Mains / Sewers	Communication pipes	Meters	Pumping stations (water / waste)
<b>Cost drivers considered</b>	<ul style="list-style-type: none"> <li>• Volume - water / sewerage</li> <li>• No. of properties</li> <li>• Km of main / sewers</li> </ul>	<ul style="list-style-type: none"> <li>• Volume – water</li> <li>• Km of comm. pipes</li> <li>• No. of comm. pipes</li> </ul>	<ul style="list-style-type: none"> <li>• Volume – water</li> <li>• No. of meters</li> </ul>	<ul style="list-style-type: none"> <li>• Volume - water / sewerage</li> <li>• kW of pumping stations</li> <li>• No. of pumping stations</li> </ul>
<b>Final cost driver</b>	<b>Km of main / sewers</b>	<b>No. of comm. pipes</b>	<b>No. of meters</b>	<b>kW of pumping stations</b>

- 3.39 Based on operational insight, we consider the length of mains and sewers the most appropriate driver of direct operating costs and direct maintenance costs related to the treated water distribution and sewerage collection parts of the network as there is a strong direct relationship between length and cost.
- 3.40 We have discounted the use of volumetric drivers (water, wastewater) across all the assets, because assets require maintenance even if there are no flows. On a similar basis, we have discounted the number of properties as a driver of cost, again because if there is no demand, maintenance will still be required.
- 3.41 Based on operational insight we have made the assumption that changes in length of a communication pipe does not have a significant impact on cost. We have also assumed that in most cases the length of a communication pipe to a property does not vary greatly.
- 3.42 The capacity of pumping stations (supply and waste) was the preferred cost driver. The advantage of this cost driver is that it should closely reflect the scaled costs associated with a

<sup>7</sup> [Sub-Group-3-NAV-Wholesale-minus-framework.xlsx \(live.com\)](#)

specific pumping station. Also, if a NAV pumping station is contributing to the flow of the incumbent's network upstream or downstream, this should be captured in the avoided cost.

- 3.43 Table 3.2 summarises and quantifies the relevant avoided costs per length or count of asset (cost driver) derived from the above steps.

**Table 3.2: Avoided ongoing costs per asset, including central costs 2024-25**

Avoided cost	Unit	Water	Wastewater		
			Sewerage	SWD	HWD
<b>Main pipes &amp; wastewater sewers</b>					
Avoided direct operational costs	£ per km pipe	1,232.90	628.54	304.33	286.90
Avoided direct capital maintenance costs	£ per km pipe	1,782.93	624.17	283.16	266.94
Allowed return	£ per km pipe	118.33	49.15	23.05	21.73
<b>Total avoided cost</b>	<b>£ per km pipe</b>	<b>3,134.16</b>	<b>1,301.86</b>	<b>610.54</b>	<b>575.57</b>
<b>Communication pipes</b>					
Avoided direct operational costs	£ per communication pipe	4.32			
Avoided direct capital maintenance costs	£ per communication pipe	6.34			
Allowed return	£ per communication pipe	0.42			
<b>Total avoided cost</b>	<b>£ per communication pipe</b>	<b>11.08</b>			
<b>Meters</b>					
Avoided direct operational costs	£ per meter	3.57			
Avoided direct capital maintenance costs	£ per meter	4.01			
Allowed return	£ per meter	2.66			
<b>Total avoided cost</b>	<b>£ per meter</b>	<b>10.24</b>			
<b>Pumping Stations</b>					
Avoided direct operational costs	£ per kW	168.56	205.23		
Avoided direct capital maintenance costs	£ per kW	19.58	134.44		
Allowed return	£ per kW	30.42	171.58		
<b>Total avoided cost</b>	<b>£ per kW</b>	<b>218.56</b>	<b>511.25</b>		

### Wholesale allowed return

- 3.44 On a new development site, if an incumbent were to serve it, the assets would be fully funded by the developer. Therefore, initially there would be no avoided returns as there would be no addition to the Regulatory Capital Value (RCV) associated with the site.
- 3.45 We recognise that when a NAV takes on a site that they will still be taking a risk as a result of owning and operating the on-site assets. Therefore, it is appropriate that the NAV receives a return for this risk and we have therefore included an avoided return in our bulk charges calculation.
- 3.46 There has currently been no discussion or best practice guidance on NAV returns as part of the bulk charges working group. However, Ofwat in its bulk charges for NAVs guidance<sup>8</sup>, has set out a methodology for calculating a NAV WACC. We have used this methodology and updated it appropriately (for example updating PR14 values with those determined at PR19) and used the equity delta (cost of equity wedge) implied by the method, to give an updated value for the NAV WACC.
- 3.47 In the regulated framework set by Ofwat, an incumbent's return is calculated as the WACC multiplied by the RCV.
- 3.48 We have applied this approach to those assets which, if owned by the incumbent, would eventually through routine capital maintenance be added to the RCV. This therefore relates

<sup>8</sup> <https://www.ofwat.gov.uk/wp-content/uploads/2018/05/Bulk-charges-for-NAV-s-final-guidance.pdf>

to the non-infrastructure assets on site (meters, communication pipes and pumping stations for water and pumping stations for wastewater). Replacement of infrastructure assets do not get added to the RCV but instead are recovered pound for pound from customers (similar to opex).

- 3.49 We have also provided for a working capital adjustment to acknowledge where a NAV may need to incur expenditure in advance of receiving income in any one particular year. We have calculated this adjustment as the allowed NAV WACC multiplied by one year of maintenance and operational expenditure for the site. We include the working capital adjustment within the allowed return line of our NAV avoided cost, as summarised in Table 3.3.

**Table 3.3: Return on on-site assets 2024-25**

Avoided cost	Unit	Water	Wastewater		
			Sewerage	SWD	HWD
Main pipes & wastewater sewers	£ per km pipe	118.33	49.15	23.05	21.73
Communication pipes	£ per communication pipe	0.42			
Meters	£ per meter	2.66			
Pumping Stations	£ per kW	30.42	171.58		

Note: This includes both the return and working capital adjustment

## Depreciation

- 3.50 Depreciation provides a broad equivalence to the annual average of capital maintenance expenditure incurred over the life of an asset, which is discussed in the section on direct operating and direct capital maintenance costs (paragraphs 3.24 to 3.32).

## Setting final bulk tariffs

- 3.51 We have considered, identified and quantified the relevant avoided costs and returns on an asset or size of asset basis, for the asset types set out in paragraph 3.27.
- 3.52 Whilst this provides transparency of the make-up of avoided costs in the wholesale minus calculation, we have received feedback from stakeholders (see section Stakeholder engagement) that setting charges bespoke to each site using site-specific asset information would not be appropriate. This is because of concerns around data provision, complexity and administrative scalability of site-specific charging and less upfront surety of charges when NAVs are assessing the financial viability of future potential sites, before they know the exact technical details.
- 3.53 We have therefore set final bulk charges based on a notional site.
- 3.54 As part of Ofwat's charging publications for new connection services, incumbents are required to publish the cost make-up of connecting a new site for a number of pre-defined site-scenarios or worked examples<sup>9</sup>. These worked examples had "been agreed collectively by companies, in consultation with stakeholders, during 2021"<sup>10</sup>.
- 3.55 We have used the scenarios for a large housing development (200 properties) to inform the asset ratios for a notional site. On this basis, we have used the number of properties as the cost driver for mains and sewers with an assumption for the average length of main or sewer

<sup>9</sup> [Common Terms And Worked Examples Effective April 2022.pdf \(ofwat.gov.uk\)](#)

<sup>10</sup> [Common Terms And Worked Examples Effective April 2022.pdf \(ofwat.gov.uk\)](#), p.1

per property; and we assume a one-to-one ratio of communication pipes and meters to properties.

- 3.56 We have also made the assumption that a standard size meter smaller than 25mm (household or non-household) and standard size communication pipe (household or non-household) is installed for all properties.
- 3.57 Our final avoided costs capture the full menu of avoided costs scalable to the number of properties on the site (Table 3.4). We have considered it appropriate to present this for a notional site without pumping stations and for a notional site, scalable to the total utilised capacity of pumping stations. This is because there are other more relevant factors than property numbers that drives the need for and capacity of pumping stations on a site. In addition, we recognise that the costs of operating and maintaining pumping stations are significant and in a single notional site charging structure this would create a noticeable cross-subsidising effect from sites without pumping stations to those with.
- 3.58 Our approach means on average, a NAV is appropriately remunerated for the avoided costs.

**Table 3.4: Menu of avoided costs for a notional NAV site, with and without pumping stations 2024-25**

<u>Avoided cost</u>	<u>Unit</u>	<u>Water</u>	<u>Wastewater</u>		
			<u>Sewerage</u>	<u>Surface Water Drainage</u>	<u>Highway Drainage</u>
<b>Main pipes, wastewater sewers, communication pipes &amp; meters</b>					
Avoided direct operational costs	£ per property	14.05	3.14	1.52	1.43
Avoided direct capital maintenance costs	£ per property	19.26	3.12	1.42	1.33
Allowed return	£ per property	3.67	0.25	0.12	0.11
<b>Total avoided cost</b>	<b>£ per property</b>	<b>36.98</b>	<b>6.51</b>	<b>3.06</b>	<b>2.87</b>
<b>Pumping Stations</b>					
Avoided direct operational costs	£ per kW	168.56	205.23		
Avoided direct capital maintenance costs	£ per kW	19.58	134.44		
Allowed return	£ per kW	30.42	171.58		
<b>Total avoided cost</b>	<b>£ per kW</b>	<b>218.56</b>	<b>511.25</b>		

- 3.59 In addition to the avoided activity level costs referred above, we are also open to passing on any environmental or other innovative cost savings to NAVs. It is appropriate we consider this on a site-specific basis, rather than a notional basis to ensure full and appropriate remuneration to a NAV for the interventions made. To ensure any such interventions are accounted for in how we calculate the charges we are not proposing a prescriptive methodology here, but rather committing to a principle to discuss this on a case-by-case basis.
- 3.60 Similarly, we are proposing a principles-based approach to considering the impact of any additional services offered, either by us to a NAV or by a NAV to us. Please do get in touch with us, our contact details are provided in section 1.
- 3.61 In summary, we are open to continuing discussions with NAVs around additional services.

### **NAV data requirements**

- 3.62 Although we are using a notional site, we do require some information from NAVs to inform the charges menu:

- Number of household and non-household properties on site;
- Number of properties connected for SWD (if there is a wastewater supply); and

- Water volume (except for a wastewater only site where wastewater volume will be sufficient<sup>11</sup>).
- 3.63 If the wastewater volume is not known then a 95% return to sewer allowance is applied to the water volume (after applying the leakage adjustment).
- 3.64 If there is a pumping station (water or sewerage) on site but average utilised capacity is not known we will provide an estimate based on the volume on site.
- 3.65 Data inputs are all requested within our bulk charges for NAVs calculator<sup>12</sup>. Necessary estimates are applied within the calculator and are used along with the inputs to set final charges.

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<sup>11</sup> On a wastewater only site where wastewater volume is not known, water volume will be sufficient as an alternative. Where estimated volumes are used Wessex Water will make the final decision on whether an estimate is reasonable for charging purposes.

<sup>12</sup> Can be found on our website here: <https://corporate.wessexwater.co.uk/our-performance/our-charges>

## 4. Developing our charges

### Industry best practice

- 4.1 Ofwat runs a 'New Appointee bulk charging working group' which is attended by representatives of both incumbent companies and NAVs. This group is developing industry best practice for the setting of bulk charges, including the use of a more bottom-up wholesale minus approach. Key outputs of the group, including the wholesale minus charging framework, have now been published<sup>13</sup>.
- 4.2 We continue to be fully engaged with the working group and have been updating our approach to align with the best practice as it continues to evolve.
- 4.3 In Summer 2022 the avoided costs sub-group developed an avoided costs checklist<sup>14</sup> for incumbents to consider in the calculated of bottom-up avoided costs.
- 4.4 We have considered all costs included in the checklist, as summarised in Appendix 1.
- 4.5 At times, how we term what we do and capture our costs within the above structure, does not perfectly align to the activities in the checklist. However we are confident that we have included all relevant avoided costs. As part of our continuous data improvements, we will continue to review the granularity of our bottom-up costs used in the calculation.
- 4.6 Our inclusion of capital maintenance costs in the bulk charges calculation is consistent with our accounting approach to capitalisation.

### Stakeholder engagement

- 4.7 We have engaged with Ofwat and stakeholders to discuss our proposed approach to setting charges. In particular, we have:
- 4.8 **Written to NAVs in our area.** We wrote<sup>15</sup> to notify NAVs of the likely impact of significant bill increases on the relevant wholesale starting point this year and to provide opportunity for further discussion.
- 4.9 **Spoken to NAVs** who operate in our area, as part of our continuous dialogue. We have reflected on the key messages from these discussions, which were<sup>16</sup>:
  - Bottom-up method of considering the relevant avoided costs (to ensure all costs are considered), with recognition that central costs such as overheads might be more suited to a fully allocated approach
  - Documentation detailing our cost allocation and avoided cost checklist
  - Confidence of cost reconciliation to the Annual Performance Report (APR) regulatory accounts
  - Concerns around the administrative scalability of bespoke charges requiring site-specific asset data

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<sup>13</sup> <https://www.ofwat.gov.uk/regulated-companies/company-obligations/ofwat-regulating-the-industry-compliance-requirements-charging/new-appointee-bulk-charging-working-group/>

<sup>14</sup> [Sub-Group-3-NAV-Wholesale-minus-framework.xlsx \(live.com\)](https://www.ofwat.gov.uk/regulated-companies/company-obligations/ofwat-regulating-the-industry-compliance-requirements-charging/new-appointee-bulk-charging-working-group/sub-group-3-nav-wholesale-minus-framework.xlsx)

<sup>15</sup> <https://corporate.wessexwater.co.uk/media/pvvlho12/bulk-charges-for-navs-letter-september-2023.pdf>

<sup>16</sup> These key messages are not intended to comprehensively capture every aspect of our respective discussions, or provide verbatim accounts. We hope these are an accurate reflection of what was discussed and do not unduly misconstrue or misrepresent any views presented.

- A preference for simplicity of the final bulk charges to help NAVs assess the financial viability of sites
- Clarifying our approach to HWD and highlighting how we are accounting for those avoided costs

4.10 We have valued the engagement and feedback received through these conversations and would welcome further discussions.

4.11 **Engaged with Ofwat** bilaterally on key aspects of our approach, including:

- Wholesale allowed return. We expect this will be an area of discussion at future working groups.
- Our proposed approach to use asset ratios to develop a view of a notional, average site, instead of pursuing site-specific charging based on NAV provided asset data, reflecting NAV feedback. We responded to the BCWG working paper 1 in September 2023 regarding our approach to HWD charges. We have included avoided costs for HWD implicitly in the bottom-up consideration of activity-based costs (see paragraph 3.32). Ofwat suggested a preference to apply a top-down deduction based on the percent of highways looked after by a NAV. Our analysis suggests that in most cases, on a NAV site, the length of highway is close to equivalent to length of sewers, so we do not see a case to alter our approach as it would result in essentially the same avoided cost.
- We also responded to the BCWG working paper 2 in September 2023 detailing our avoided cost publications.

## Changes for 2023-24

4.12 We have moved from a top-down to bottom-up approach for calculating the direct avoided costs, reflecting working group discussions. We have also included an avoided cost element for returns.

4.13 We have considered and where feasible adopted feedback from our engagement with stakeholders for our 2023-24 charges, including:

- Publishing this document to provide clarity and transparency
- Adopting a notional site for the basis of charging with a simple menu (see section Setting final bulk tariffs)
- Confirming source cost data reconciles to the APR (see paragraph 15.1)

4.14 Due to the change in methodology from a top-down to bottom-up approach, we cannot make a like-for-like comparison of the menu of avoided costs for 2023-24 compared to 2022-23 charges. However, we have compared avoided costs for a notional site and observe that for both water and waste sites, with and without pumping stations the avoided cost element has increased. This is primarily attributable to:

- inclusion of a WACC return;
- moving to a bottom-up approach has revealed increased avoided costs in some areas, especially costs associated with pumping stations;
- the change in cost drivers, e.g. the switch to a per property cost driver for mains, communication pipes and meters has increased the avoided costs. The switch to per pumping station kW capacity from 2022-23's per m<sup>3</sup> has also increased the avoided costs;



- the impact of inflation on avoided costs.

### **Changes for 2024-25**

- 4.15 In response to the independent peer review from Frontier Economics (discussed in more detail in section 5) we made the decision to extend the time series of our data from 3 to 5 years for 2024-25 charges. This mirrors the length of a price control period and therefore smooths any uneven spend profile.
- 4.16 The level of avoided costs for 2024-25 have increased since 2023-24, especially for water, and this is due to:
- The addition of two years operational and maintenance cost data to create a five year average. 2022-23 was a particularly high cost years for the Company from an operational cost perspective particularly for water and 2018-19 was also a high spend year for water;
  - the impact of inflation.

### **Considerations for future changes**

- 4.17 Reflecting the evolving nature of best practice, continuation of working group discussions, longer-term recommendations arising from the peer review and feedback from stakeholder engagement, we plan to consider the below (and anything else that arises in the interim) as part of our next review of charges:
- Continuous review of cost drivers, for example we could consider cost drivers for direct operating costs separate to cost drivers for direct capital maintenance costs.
  - Continuous review of bottom up costs and granularity

## 5. Assurance

- 5.1 We have reconciled our bottom-up avoided costs with our APR regulatory submission to Ofwat. This gives assurance that all costs have been considered and none have unintentionally been omitted.

### Independent Peer Review

- 5.2 To ensure our new methodology is compliant with all relevant guidance and charging principals, we have (in addition to our normal assurance procedures) had our charges model and methodology, including this Method Statement, externally peer reviewed by Frontier Economics (October 2022).
- 5.3 We have published the full peer review report from Frontier, which can be found on our website<sup>17</sup>.
- 5.4 In summary, “Frontier Economics were commissioned by Wessex Water to peer review its revised methodology for setting bulk charges for New Appointments and Variations (NAVs) in 2023/24. In particular, the aim of this work was to assess whether the Wessex approach complies with the most recent bulk charging guidance for new appointees issued by Ofwat<sup>18</sup>,<sup>19, 20</sup>, emerging best practice from the Bulk Charging Working Group (BCWG)<sup>21</sup>, as well as its obligations under the application of the Competition Act 1998<sup>22</sup>.

The scope of this work is limited to a review of Wessex’s bulk charging methodology and a high level review of its underlying bulk charges model only. A technical review has been separately commissioned for a formal assurance of the efficiency of inputs, calculations and accounting approach.<sup>23</sup>”

- 5.5 Frontier Economics found that, “Subject to the limitations of our peer review and the high-level nature of Ofwat’s guidance, we consider that Wessex’s approach for setting bulk charges for new appointments and variations and its approach to explaining them to stakeholders in its method statement is
- in line with the latest guidance available,
  - has made progress towards aligning to the current industry best practice (which we note continues to evolve), and
  - not inconsistent with the economic principles of competition law<sup>24</sup>.
- 5.6 Frontier Economics recommend that, “Going forward, we consider that a longer time period than the current three years for the averaging of costs may be more appropriate for the calculation of direct ongoing capital maintenance costs, to give greater consideration to the level, timing and profile of all maintenance costs incurred over the lifetime of the asset. This would also potentially give greater consideration to the length of the regulatory cycle. We

<sup>17</sup> <https://corporate.wessexwater.co.uk/our-performance/our-charges>

<sup>18</sup> [Ofwat, January 2021, Bulk charges for new appointees – guidance on our approach and expectations](#)

<sup>19</sup> [Ofwat, January 2021, Bulk charges for new appointees - conclusions on revising our guidance](#)

<sup>20</sup> <https://www.ofwat.gov.uk/wp-content/uploads/2023/09/IN-2309-Information-notice-charging-information-requirements.pdf>

<sup>21</sup> [Ofwat Bulk Charging Working Group, August 2022, Setting the relevant starting point and overall tariff approach](#)

<sup>22</sup> [UK Competition Act, 1998, and other Enactments \(Amendment\) Regulations 2004 \(S.I. 2004 No.1261\)](#)

<sup>23</sup> Frontier Economics (2022), Wessex’s Approach to Setting Bulk Charges for New Appointments and Variations (NAVs), p.1

<sup>24</sup> Frontier Economics (2022), Wessex’s Approach to Setting Bulk Charges for New Appointments and Variations (NAVs), p.9

recommend that Wessex continues to consider ways to reflect the smoothing the costs over the whole asset life”<sup>25</sup>. As mentioned we have since updated our methodology to consider a five-year average of costs for the 2024-25 charging year.

- 5.7 As we have only made changes to the existing methodology, rather than introduce a new methodology, we consider the findings reached by Frontier Economics are valid for our 2024-25 charges which use that same methodological framework.

### **Technical Audit**

- 5.8 We have used Mott MacDonald, as expert technical auditors, to review all our charges including bulk charges for NAVs. Mott MacDonald found that our bulk charges for NAVs contain no errors and comply with all relevant guidance.

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<sup>25</sup> Frontier Economics (2022), Wessex’s Approach to Setting Bulk Charges for New Appointments and Variations (NAVs), p.9

## 6. Glossary

<b>Term</b>	<b>Definition</b>
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 wastewater 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.
Consumer Prices Index including owner occupiers' housing costs (CPIH)	According to ONS, CPIH is the most comprehensive measure of inflation. In the water and sewerage industry charges are linked to November CPIH.
Direct capital maintenance costs	Expenditure on activities such as asset replacement and asset renewals required to maintain the network. Capital maintenance costs includes all infrastructure maintenance and replacement costs.
Direct operating costs	Expenditure avoided in the operating and monitoring of assets. Direct operating costs include but are not limited to labour costs, power, materials and consumables, Local Authority rates, and general and support costs.
End-customers	Household retail customers and business retail customers.
Full-service NAV	A full-service NAV is a NAV that provides drinking water (either buying it wholesale or supplying it from a local resource like a borehole) and treats wastewater onsite and then discharges it locally or treats it and reuses it for irrigation and toilet flushing.
Highway Drainage (HWD)	Rainwater that drains from roads and footpaths and flows into drainage systems.
New Appointment and Variation (NAV)	A water company that (either directly or indirectly) has replaced, or will replace, one or more incumbent water companies in relation to specific sites and for whom we do not currently set individual price controls. Although a NAV can operate its own treatment facilities, a NAV normally obtains a bulk supply of water from, and/or agrees a bulk discharge of wastewater to, an incumbent water company.
Regulatory Capital Value (RCV)	The regulatory capital value (RCV) is one of the critical components underlying price limits. It was developed for regulatory purposes. It is the value of the capital base of each water and or sewerage company for the purposes of setting price limits. The RCV is now widely used by the investment community as a proxy for the market value of a regulated business.
Surface Water Drainage (SWD)	Rainwater that drains from roofs of buildings and yards and other hard standing areas appurtenant to buildings into drainage systems.

## Appendix 1 Checklist of avoided costs

Checklist		Water		Wastewater		Central Costs	Notes / Comments
Code	Activity	Direct operating cost	Direct capital maintenance cost	Direct operating cost	Direct capital maintenance cost		
WD1	Routine and adhoc water quality sampling. Regulatory monitoring at every site irrespective of size	✓	✓				
WD2	DWI - Drinking Water Safety Planning (Water Supply (Water Quality) Regulations 2016 - Regs 27 & 28), Monthly water quality reporting, submission of annual data returns.	✓	✓				
WD3	Monitoring and auditing of Laboratory performance - Water Supply (Water Quality) Regulations 2016 - Regulation 16	✓	✗				Opex only by its nature
WD4	Water Fittings inspections - enforcement of Water Supply (Water Fittings) Regulations 1999	✓	✗				Opex only by its nature
WD5	Supplementary water quality monitoring e.g. Response to customer contacts,	✓	✓				
WD6	Additional flushing/sampling due to poor performance and/or condition of assets owned and maintained by the upstream incumbent	✓	✗				Opex only by its nature
WD7	Local Authority and Public Health England Liaison and updates.	✓	✗				Opex only by its nature
WD8	Planned Maintenance - e.g. flushing activities	✓	✓				
WD9	Unplanned Maintenance	✓	✓				
WD10	Emergency Response	✓	✓				
WD11	Meter maintenance / replacement	✓	✓				
WD12	Meter accuracy testing costs	✓	✗				Opex only by its nature
WD13	Meter reading	✗	✗				This is a retail cost, therefore we have excluded.
WD14	Battery replacement	✓	✗				Opex only by its nature
WD15	Arrangements for sharing meter data	✓	✗				Opex only by its nature
WD16	Standby arrangements	✓	✗				Opex only by its nature
WD17	Incumbent bulk metering costs	✗	✗				This is not an avoided cost (we would not incur bulk metering costs if we ran the site)

WD18	Financial penalties for GSS failure - Also GSS payments made to customers as a consequence of upstream incumbent failure.	✓	✗				Opex only by its nature, implicitly included
WD19	Network losses / unaccounted for water at a direct wholesale cost.	✓	✗				We capture this in the leakage adjustment to the relevant wholesale starting point
WD20	Activities to monitor and control leakage/unaccounted for water	✓	✓				We capture this in the leakage adjustment to the relevant wholesale starting point
WD21	Wholesale cost for 'free' water provided under social tariffs	✗	✗				This is a retail cost. It is funded through standard customers retail bills via the cross subsidy so there should be no avoided cost to the incumbent
WD22	Offsite network maintenance / repair (No income if NAV tariff assumes connection at boundary)	✗	✗				We assume that the NAV connection is at the boundary and therefore there is no income
WD23	Water resource planning and drought plans	✗	✗				This is not an avoided cost (this would only be an avoided cost if the NAV had their own water resource)
WWD1 and WWD17	Planned / unplanned pumping station maintenance			✓	✓		
WWD2 and WWD18	Planned sewer jetting maintenance			✓	✓		
WWD3	Unplanned / emergency response and or maintenance			✓	✓		
WWD4	Telemetry			✓	✓		
WWD5	Planned / unplanned sewer jetting, blockage removal			✓	✗		Opex only by its nature
WWD6	Incumbent customer meter data costs + supplementary data.			✗	✗		This is a retail cost, therefore we have excluded.
WWD7	Incumbent discharge costs for water losses not returned to sewer i.e. where bulk discharge costs are based on a bulk water meter.			✓	✓		We account for this by applying the non-return to sewer allowance to volume
WWD8 and WWD22	Capital replacement in made up ground			✓	✓		
WWD9 and WWD23	Wholesale cost for 'free' sewerage provided under social tariffs			✗	✗		This is a retail cost. It is funded through standard customers retail bills via the cross subsidy so there should be no avoided cost to the incumbent
WWD10 and WWD24	Sewer flooding remediation and compensation			✓	✗		Opex only by its nature
WWD11	Financial penalties for GSS failure - Also GSS payments made to customers as a consequence of upstream incumbent failure.			✓	✓		Opex only by its nature, implicitly included

WWD12 and WWD25	Offsite network maintenance / repair (No income if NAV tariff assumes connection at boundary)			x	x		We assume that the NAV connection is at the boundary and therefore there is no income
WWD13	Tankering incl. pre NAV approval			✓	✓		
WWD14	Trade effluent costs - admin, monitoring, data sharing with downstream incumbent			✓	✓		
WWD19	Incidence response sewer jetting			✓	✓		
WWD20	De-silting			✓	✓		
WWD21	Clearing and maintenance of drainage areas.			✓	✓		
WWD26	Discharge permits/costs			✓	✓		
C1	Finance/ HR / Legal and IT staff resource costs					✓	
C2	Regulatory Costs - Licence fees, regulatory reporting and compliance					✓	
C3	NAV application and administration costs.					✓	
C4	End customer billing and customer service costs					x	This is a retail cost, therefore we have excluded.
C5	Management costs					✓	
C6	External consultancy					✓	
C7	IT systems and development					✓	
C8	Travel and subsistence					✓	
C9	Vehicle fleet costs					✓	
C10	Plant, tools and equipment					✓	
C11	Health and Safety					✓	
C12	Insurance					✓	
C13	Employer pension					✓	
C14	Employer NI					✓	
C15	Premises and utilities					✓	
C16	Telecommunication costs					✓	
C17	Business Rates					✓	
C18	Recruitment					✓	
C19	Training and Development					✓	
C20	Bank charges incl. those relating to customer income collection					x	This is a retail cost, therefore we have excluded.
C21	Customer bad debt and debt recovery costs.					x	This is a retail cost, therefore we have excluded.

C22	Revenue protection and voids management.					x	This is a retail cost, therefore we have excluded.
C23	External audit / accountancy costs					✓	
C24	Asset Financing Costs					✓	
C25	Working Capital					x	This is not an avoided cost, however we have made a provision for this. Please see section on returns
C26	Incumbent Working Capital					x	This is not an avoided cost, however we have made a provision for this. Please see section on returns
C27	Marketing, Branding and Customer Relations					✓	
C28	Billing systems costs					x	This is a retail cost, therefore we have excluded.
C29	Billing and other postage / stationery costs					x	This is a retail cost, therefore we have excluded.
C30	Cost of Debt					✓	Please see section on returns – this is covered by the returns and working capital allowance we provide.

Notes:

WWD15 and WWD16 not in checklist

Central costs have been allocated on a top-down basis



## Appendix 2 Calculator Worked Example

We will examine a theoretical new development site by inputting data into our Bulk Charges for NAVs calculator which is available on our website<sup>26</sup>, we are also happy to provide a copy on request.

The details of the site are as follows:

- There are 400 households and 10 non-households both with water and wastewater services supplied by a NAV.
- None of the properties are connected for SWD
- Household water volume on site is 36,000m<sup>3</sup>
- Non-household water volume on site is 1,000m<sup>3</sup>
- Wastewater volume is not known
- The site has one NAV operated water booster pumping station with utilised capacity of 5kW
- The site also has one NAV operated sewerage pumping station with utilised capacity of 10kW
- The site has 1 water bulk meter

Each relevant sheet of the calculator will be examined in turn.

### Cover sheet

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Cover sheet</b>													
2														
3	Note: This calculator is designed to give an indication of the charges at a NAV site. Charges will be applied by Wessex Water in line with Company Bulk Charges for NAVs policies.													
4														
5	<b>Key</b>													
6														
7		Input cell												
8														
9	<b>Version history</b>													
10														
11	<b>Version number</b>	<b>Version name</b>	<b>Publication date</b>											
12	1.0	24 Indicative charges 2023-	01/12/2022											
13	1.1	Final charges 2023-24	01/02/2023											
14	1.2	Final charges 2023-24 - usability updates	22/02/2023											
15	1.3	25 Indicative charges 2024-	28/11/2023											
16	2.0	Final charges 2024-25	01/02/2024											
17														
18	<b>Further information</b>													
19														
20	Further information and associated bulk charges for NAVs documents can be found on our website at the following links:													
21	<a href="https://corporate.wessexwater.co.uk/our-performance/our-charges">https://corporate.wessexwater.co.uk/our-performance/our-charges</a>													
22	<a href="https://www.wessexwater.co.uk/services/building-and-developing/new-appointments-and-variations">https://www.wessexwater.co.uk/services/building-and-developing/new-appointments-and-variations</a>													
23														
24														
25														
26														

<sup>26</sup> <https://corporate.wessexwater.co.uk/our-performance/our-charges>

This sheet has a key, version history for the document and details of where further information can be obtained.

**Instructions**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Instructions</b>													
2														
3	1) Familiarise yourself with the sheets in the spreadsheet. The only sheet that requires any input is "Inputs NAV".													
4	2) Answer the questions at the top of the "Inputs NAV" sheet.													
5	3) The calculator will grey out any inputs that are not required based upon your answers.													
6	4) Certain inputs are required as a minimum to use the calculator - enter these (use the notes in the sheet to help if needed). If only a wastewater service													
7	5) Inputs are summarised in the "Summary of inputs" sheet - directly from Inputs NAV and applying leakage and return to sewer adjustments if needed for													
8	6) The Summary of inputs feed into the relevant calc sheet.													
9	7) Check over the relevant sheets.													
10	8) The "Outputs summary" sheet summarises the charges, avoided costs and final NAV tariff.													
11	9) The "Bulk charges for NAVs method statement" document gives an example if you need further guidance - this document along with this calculator can													
12														
13	<b>Assumptions</b>													
14														
15	With reference to item 4 if wastewater volume is not known, the calculator will provide a forecast using water volume with the leakage adjustment (5.5%)													
16	If you provide wastewater volume for a site we do need not apply the leakage adjustment or return to sewer percentage.													
17	If you have a water booster or sewerage pumping station but do not know the utilised capacity, an estimate based upon the water or wastewater volume													
18	This calculator is designed for a typical NAV site and may not be cover all possibilities. Please do not hesitate to get in touch with if us if you need any as													
19														
20														
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														

This sheet provides instructions on how to use the calculator. It also details the assumptions made within the calculator.

### Inputs NAV

	A	B	C	D	E	F	G	H
1	<b>Inputs NAV</b>							
2								
3	<b>Site information</b>	<b>Unit</b>	<b>Value</b>	<b>Notes</b>				
4								
5	Which of the following water services does the NAV provide on site?							
6	Water household service		Yes					
7	Water non-household service		No					
8	Water booster pumping station		No					
9								
10	Which of the following wastewater services does the NAV provide on site?							
11	Wastewater household service		Yes					
12	Wastewater non-household service		Yes					
13	Sewerage pumping station		Yes					
14								
15	Do you know the wastewater discharge volume on site?							
16	Wastewater household		No	If you do not have a wastewater volume we will need a water volume to calculate wastewater vo				
17	Wastewater non-household		No	If you do not have a wastewater volume we will need a water volume to calculate wastewater vo				
18								
19	Do you know the utilised capacity of the pumping station on site?							
20								
21	Sewerage pumping station		No	If you do not know the utilised capacity of the pumping station this will be estimated based on p				
22								
23	<b>Water</b>							
24								
25	Household properties	nr	400					
26	Household volume per year	m³	36,600	If you do not have a wastewater volume we will need a water volume to calculate wastewater vo				
27								
28	Non-household volume per year	m³	1,000	If you do not have a wastewater volume we will need a water volume to calculate wastewater vo				
29								
30	Bulk meters	nr	1	If you have one bulk meter that measures volumes for water and wastewater, only include one o				
31								
32	<b>Wastewater</b>							
33								
34	Household properties connected for Surface Water Drainage	nr		If you offer this service you will need to populate this input (even if you have already populated t				
35	Household properties not connected for Surface Water Drainage	nr	400	If you offer this service you will need to populate this input (even if you have already populated t				

The questions on the NAV input sheet are required and once answered will inform the remaining inputs required for the site. The calculator will grey out any inputs that are not required.

Inputs that are not greyed out will require you to input data, the notes column should help with clarity. If only a wastewater service is provided but wastewater volume is not known, a water volume will be required to calculate wastewater volume.

### Summary of inputs

	A	B	C	D	E	F	G
1	<b>Summary of inputs</b>						
2							
3	<b>Site information</b>	<b>Unit</b>	<b>Value</b>	<b>Notes</b>			
4							
5	Which of the following water services does the NAV provide on site?						
6	Water household service		Yes				
7	Water non-household service		Yes				
8	Water booster pumping station		Yes				
9							
10	Which of the following wastewater services does the NAV provide on site?						
11	Wastewater household service		Yes				
12	Wastewater non-household service		Yes				
13	Sewerage pumping station		Yes				
14							
15	Do you know the wastewater discharge volume on site?						
16	Wastewater household		No				
17	Wastewater non-household		No				
18							
19	Do you know the utilised capacity of the pumping station on site?						
20	Water booster pumping station		Yes	If you do not know the utilised capacity of the pumping station this will be estimated based			
21	Sewerage pumping station		Yes	If you do not know the utilised capacity of the pumping station this will be estimated based			
22							
23	<b>Water</b>						
24							
25	Household properties	nr	400	Feeds from Inputs NAV.			
26	Household volume per year	m <sup>3</sup>	36,600	Feeds from Inputs NAV. The leakage adjustment is applied later in the Water calc sheet.			
27	Non-household properties	nr	10	Feeds from Inputs NAV.			
28	Non-household volume per year	m <sup>3</sup>	1,000	Feeds from Inputs NAV. The leakage adjustment is applied later in the Water calc sheet.			
29	Utilised capacity of water booster pumping stations	kW	5	Feeds from Inputs NAV.			
30							
31	<b>Wastewater</b>						
32							
33	Household properties connected for Surface Water Drainage	nr	-	Feeds from Inputs NAV.			
34	Household properties not connected for Surface Water Drainage	nr	400	Feeds from Inputs NAV.			
35	Household discharged volume per year	m <sup>3</sup>	32,858	If wastewater volume is known this feeds from Inputs NAV. If wastewater volume is not know			

This sheet summaries the inputs relevant to the site as entered in the “Inputs NAV” sheet. If, as in this instance, wastewater volume is not known the calculator will estimate wastewater volume by applying the leakage adjustment (5.5%) and the return to sewer percentage (95%) to the water volume.

### Charges schedule

	A	B	C	D	E	F	G	H
1	<b>Charges schedule</b>							
2								
3	Household wholesale charges - to inform wholesale starting point							
4								
5	<b>Water</b>							
6								
7	<b>Description</b>	<b>Unit</b>	<b>Charge</b>					
8	Meter Charge*	£ per annum	5					
9	Volume Charge	£ per m³	2.4979					
10								
11	<b>Wastewater</b>							
12								
13	<b>Description</b>	<b>Unit</b>	<b>Foul</b>	<b>Surface Water Drainage**</b>	<b>Highway Drainage</b>			
14	Drainage Charge*	£ per annum		26	24			
15	Volume Charge	£ per m³	1.9637					
16	*For the purposes of simplicity when charging we make the assumption that all meters are the size of a standard meter of <25mm.							
17	**Only payable where the property is connected for Surface Water Drainage							
18								
19	Non-household wholesale charges - to inform wholesale starting point							
20								
21	<b>Water</b>							
22								
23	<b>Description</b>	<b>Unit</b>	<b>Charge</b>					
24	Meter Charge*	£ per annum	5					
25	Volume Charge	£ per m³	2.5425					
26								
27	<b>Wastewater</b>							
28								
29	<b>Description</b>	<b>Unit</b>	<b>Foul</b>	<b>Surface Water Drainage**</b>	<b>Highway Drainage</b>			
30	Drainage Charge*	£ per annum		26	24			
31	Volume Charge	£ per m³	1.9953					
32	*For the purposes of simplicity when charging we make the assumption that all meters are the size of a standard meter of <25mm.							
<div style="display: flex; justify-content: space-between; border-top: 1px solid black; padding-top: 5px;"> <span>Cover sheet</span> <span>Instructions</span> <span>Inputs NAV</span> <span>Summary of inputs</span> <span style="background-color: #4F81BD; color: white; padding: 2px 5px;">Charges schedule</span> <span style="background-color: #0070C0; color: white; padding: 2px 5px;">Water calc</span> <span style="background-color: #70AD47; color: white; padding: 2px 5px;">Wastewater calc</span> <span>...</span> </div>								

This sheet details our wholesale charges and avoided costs applicable to NAVs.

### Water and Wastewater Calc

	A	B	C	D	E	F	G
1	<b>Water calc</b>	<b>Unit</b>	<b>Value</b>				
2	<b>Weighted average wholesale tariff</b>						
79							
80	<b>Avoided costs</b>						
106							
107	<b>Final NAV tariff</b>						
108							
109	Weighted average wholesale tariff water	£ per m <sup>3</sup>	2.5583				
110	Volumetric avoided cost water	£ per m <sup>3</sup>	0.4575				
111	Final NAV tariff water	£ per m <sup>3</sup>	2.1008				
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This sheet calculates a water weighted average wholesale tariff and the avoided costs for the NAV site in the corresponding sections (which expand outwards to show detailed calculations). The “Final NAV tariff” section summarises the final tariff that will be applied on site. The “Wastewater calc” sheet works on a very similar basis.

**Outputs summary**

	A	B	C	D	E	F	G	H	I
1	<b>Outputs summary</b>	<b>Unit</b>	<b>Water</b>	<b>Wastewater</b>	<b>Notes</b>				
2									
3	<b>Weighted average wholesale charge</b>								
4	Total wholesale fixed charge	£	2,104	9,840					
5	Total wholesale volume charge	£	88,798	66,314					
6	Total wholesale charge	£	90,902	76,154					
7									
8	Total wholesale charge	£	90,902	76,154					
9	Total volume (after leakage adjustment)	m <sup>3</sup>	35,532	33,755					
10	Weighted average wholesale charge	£ per m <sup>3</sup>	2.5583	2.2560					
11									
12	<b>Avoided costs</b>								
13	Avoided costs - main pipes, wastewater sewers, communication pipes & meters	£	15,162	5,100					
14	Avoided costs - pumping stations	£	1,093	5,113					
15	Total avoided costs	£	16,255	10,213					
16									
17	Total avoided costs	£	16,255	10,213					
18	Total volume (after leakage adjustment)	m <sup>3</sup>	35,532	33,755					
19	Total avoided costs	£ per m <sup>3</sup>	0.4575	0.3026					
20									
21	<b>Expected charge for the site</b>								
22	Total wholesale charge	£	90,902	76,154					
23	Total avoided costs	£	16,255	10,213					
24	Expected NAV charge for the site	£	74,647	65,941	This is how much we expect to charge the NAV for the s				
25									
26	<b>Final NAV tariff</b>	<b>£ per m<sup>3</sup></b>	<b>2.1008</b>	<b>1.9535</b>	Our final charge is on a £ per m <sup>3</sup> basis				
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This sheet summarises the NAV tariff for both water and wastewater.