

### 1. Introduction

The New Appointments and Variations (NAV) regime allows new entry into the wholesale water and sewerage sector and also allows incumbents to expand into other geographic areas. NAVs can choose to purchase a bulk supply of water and/or wastewater services from an incumbent. A bulk supply is the supply of water and/or sewerage from one appointed company to another. This document only relates to bulk supplies from an incumbent water company to a NAV.

In May 2018, Ofwat published final guidance on bulk supply charges for NAVs<sup>1</sup>. The guidance suggests that incumbent wholesalers should adopt a 'wholesale-minus' approach to bulk supply charges for NAVs, which deducts costs avoided by the incumbent as a result of NAV activity from the relevant wholesale charge.

During autumn 2018, we held a number of informal consultation sessions with representatives from actual and potential NAV operators in the area served by United Utilities Water (Uuw), where we discussed our interpretation of Ofwat's bulk charges guidance and presented our initial view of NAV discounts. These conversations were productive and allowed us to better understand NAVs' priorities. Since September we have been working further on building our NAV tariff proposals based on the findings from the informal consultation process.

This document presents Uuw's indicative NAV charges. We are also seeking views from stakeholders on the methodology we have implemented to calculate these charges. We will consider the responses received prior to publishing finalised NAV tariffs in June 2019.

Our indicative NAV charges can be found in Appendix 1. In addition, we have published a NAV tariff calculator alongside this consultation which demonstrates how we will apply our indicative charges to each NAV site.

If you would like to comment on any or all of this consultation, we invite you to send responses to [NAVconsultation@uuplc.co.uk](mailto:NAVconsultation@uuplc.co.uk) by Friday 8 March 2019.

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<sup>1</sup> <https://www.ofwat.gov.uk/wp-content/uploads/2018/05/Bulk-charges-for-NAVs-final-guidance.pdf>

# A consultation on United Utilities’ proposed NAV tariff

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# A consultation on United Utilities' proposed NAV tariff

## 2. Consultation questions

**Question 1** – Do you agree with our proposal to use standardised, rather than bespoke, NAV tariffs?

**Question 2** – Do you think we have identified all areas of avoided activity that should be reflected in the NAV discount? If not, then please explain what other areas of avoided activity we should consider.

**Question 3** – Do you agree with our approach to compensating capital related costs via the income offset?

**Question 4** – Do you agree with our proposal to offer a working capital allowance?

**Question 5** – Do you have any comments on our approach to reconciliation of outturn customer numbers, the bulk supply meter or providing an additional discount to sites where a customer holds a trade effluent consent with the NAV?

**Question 6** – Have we presented the tariffs in an accessible and transparent way or could this be improved?

**Question 7** – Do you have any comments on our approach to surface water and highways drainage services?

**Question 8** – What, if any, additional services could NAVs wish to purchase from U UW?

**Question 9** – Do you agree that the service levels for the additional services offering should be the same as those we provide on our own network?

**Question 10** – Do you agree with our proposed payment terms?

**Question 11** – Do you have any other comments on our NAV tariff proposals?

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## 3. A standardised versus a bespoke approach

Each NAV site will be different, in terms of size and configuration. The differences in the type of site will drive differences in the network built to serve it. For example, a site made up of blocks of flats will require a different network than a site consisting of large detached houses. We could reflect this variation within the NAV tariff, and create a bespoke tariff for each NAV site, which reflects the unique characteristics of that site. This could be done, for example, by reflecting specific charges for the length of main per customer.

Alternatively, we could adopt a standardised approach with one set of NAV tariffs. This would be applied to all sites and would reflect the average characteristics of new developments in general. There are advantages and disadvantages to each approach, which we set out below.

Approach	Advantages	Disadvantages
Standardised	<ul style="list-style-type: none"><li>• Provides considerable certainty to NAVs, which will help NAVs estimate charges, and hence, costs in advance.</li><li>• Lower administrative burden on all parties.</li><li>• Quicker turnaround for bulk supply agreements.</li></ul>	<ul style="list-style-type: none"><li>• Reflects average cost of all developments, but may not reflect the unique characteristics of each individual site.</li></ul>
Bespoke	<ul style="list-style-type: none"><li>• The NAV tariff should reflect the unique characteristics of each individual site.</li></ul>	<ul style="list-style-type: none"><li>• Higher administrative burden.</li><li>• Could result in changes to charges as better data becomes available.</li><li>• Slower turnaround for bulk supply agreements due to assurance and governance safeguards, which will make it difficult for NAVs to estimate charges in advance.</li></ul>

We discussed these two options with NAVs, and there was a widespread preference for the standardised approach. It was recognised that some sites would benefit and others wouldn't, but that charges across a number of sites would be fair and reflect the costs of new developments on average. NAVs also suggested that the benefit of certainty and a relatively streamlined bulk supply agreement would outweigh the perceived benefits from a bespoke approach.

Based on this feedback, **our proposal is the standardised approach.** We note that if stakeholders agree with our position, we would not also offer a bespoke tariff. This would ensure that there was a fairer balance of charges than a situation where customers asymmetrically incentivised to choose bespoke tariffs only when they appeared to be cheaper than the standardised tariff.

### 3.1. A standardised approach to NAV tariffs

This section sets out how we propose to implement a standardised approach to NAV tariffs.

There are two key assumptions we make in order to calculate a standardised NAV tariff. One is the length of water main or sewer per property. The other is the consumption or use per property.

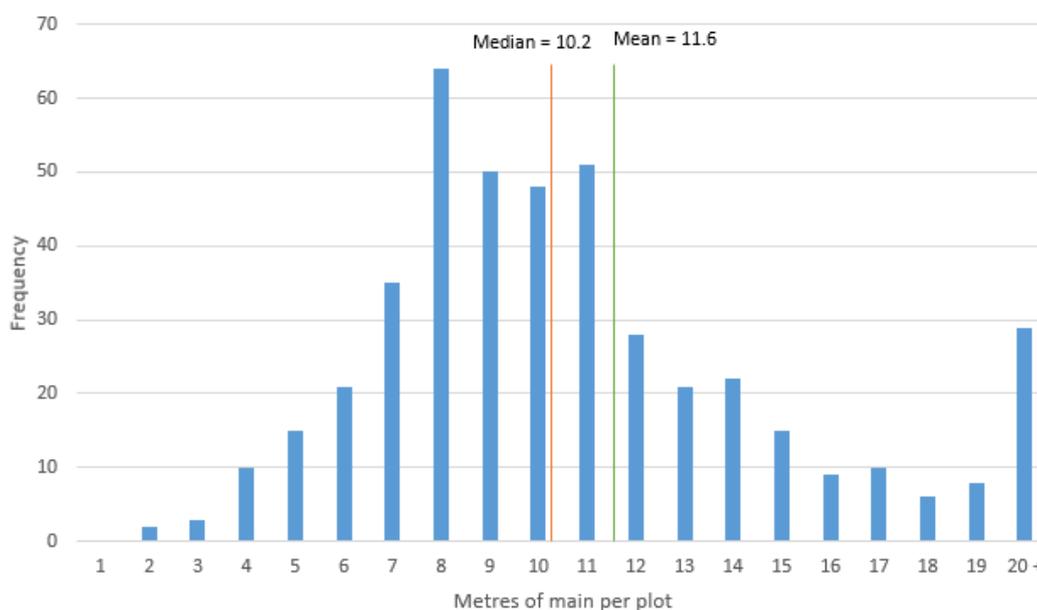
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We have made an assumption on how many metres of main/sewer per plot a NAV site might have based on our existing data on new developments in the region. This data covers each of domestic and commercial sites, separately allowing us to understand how the characteristics of each differed. This meant that we were able to calculate separate NAV charges for domestic and commercial sites.

We have also estimated consumption for domestic and commercial properties. For domestic properties, we used data from our Water Resource Management Plan (WRMP) on consumption at houses built since 2010. We assume that this is reasonably representative of consumption on a NAV site. For commercial properties, we have used consumption data from the Central Market Operating System (CMOS).

For illustration we present the data for domestic sites in Figure 1 below. The Figure is based on 451 data points.

Figure 1 - metres of water main on domestic developments



The length of main/sewer per plot is a key determinant of the NAV tariff. Where rounding is required, we have rounded the length of main/sewer per customer plot up to the nearest whole number. This means that the assumed discount is slightly higher than would otherwise have been the case. Note that the median and mean set out in Figure 1 are used for illustrative purposes only; only the rounded up versions are used to calculate the NAV tariff. We set out all assumptions used in the NAV tariff calculations in Table 1 below.

Table 1 - NAV tariff assumptions

NAV tariff	Length of main per customer plot	Per customer consumption
Household water NAV charge	12 metres	88 m3/year
Household foul NAV charge	5 metres	88 m3/year
Commercial standard water NAV charge	42 metres	250 m3/year
Commercial standard foul NAV charge	18 metres	250 m3/year
Select 50 water NAV charge	100 metres	75,000 m3/year
Select 180 water NAV charge	100 metres	278,000 m3/year
Select 750 water NAV charge	100 metres	1,208,000 m3/year
Select foul NAV charge	43 metres	75,000 m3/year

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We note that the Select tariffs already have a discount built into them to reflect the network these customers are assumed not to use. In addition, we have applied a further discount to reflect the on-site network associated with these customers, albeit this is a smaller proportion than for domestic customers, given the existing discount already built into our Select tariffs.

**Question 1** – Do you agree with our proposal to use standardised, rather than bespoke, NAV tariffs?

## 4. How we calculated our indicative NAV tariff

We have developed our indicative NAV tariff according to our interpretation of Ofwat's guidance and feedback given by NAVs during our informal consultation process. We summarise our interpretation of each in Table 2 below.

*Table 2 - Interpretation of guidance and feedback*

Summary	Description
<i>Ofwat guidance</i>	
Wholesale minus	Costs avoided by the incumbent should be deducted from the relevant wholesale charge.
Whole-life costs	All deductions should reflect the whole-life cost of the asset.
Deducted cost types	The incumbent will avoid both operating costs and capital costs.
Avoided activities	The NAV tariff should reflect the activities that the NAV is expected to perform on-site.
<i>Based on informal NAV consultation</i>	
Fixed discount	NAVs preferred a fixed discount that does not vary with site characteristics, as this provides additional certainty in business planning.
Working capital discount	An industry stakeholder suggested that we offer a working capital allowance to NAVs.

## 5. Developing our indicative NAV tariff

We now set out how we have calculated our indicative NAV tariff. If you have any comments which are not covered by our questions, please include your response as part of your answer to question 11.

### 5.1. The starting point

We use the relevant wholesale charge as the starting point. For example, we would use the household wholesale charge for a residential development. Where a development is mixed, we weight the relevant wholesale charges using assumed consumption. We do not consider it appropriate to use customer numbers as a weighting because this will result in non-cost reflective charges where – for example - there is a large user on a site shared with other regular users.

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Table 3 - The starting point

NAV tariff	Included in starting point
<i>Wholesale Water</i>	
Volumetric charge	The wholesale water volumetric tariffs are used as the starting point for the NAV water volumetric tariff.
Meter standing charge	The meter standing charge is excluded from the starting point as the NAV will be responsible for on-site meters.
Select fixed charge	The discount for Select tariffs is given purely against the volumetric tariff which means there are no deductions to this starting point.
<i>Wholesale Wastewater</i>	
Volumetric	The wholesale foul volumetric tariffs are used as the starting point
Trade effluent	Where there is a trade effluent consent on-site, and the strength of the effluent significantly exceeds the UU average effluent strength, we may charge according to the Mogden formula.
<i>Retail</i>	
Retail	The NAV tariff is a wholesale charge, so no retail components are included.

## 5.2. Deductions to the starting point

### 5.2.1. Market reform costs

Non-household market reform costs are included in the published non-household wholesale charges. Therefore, we have deducted these costs from the published non-household charges. We do not expect another wholesaler to contribute to the costs UUW incurs when interacting with NHH retail market.

### 5.2.2. On-site ongoing costs

Ofwat's guidance states that the NAV tariff should reflect the activities that a NAV is expected to perform on-site. We assumed that the activities performed on-site by a NAV will be the same as those UUW would have performed. We identified all activities that UU carries out on sites typical of those a NAV might operate, and calculated how much cost we would avoid as a result of not carrying out these activities.

The full list of discounted activities is summarised below. We note that these relate to ongoing operating costs. Our approach to capital costs is set out in section 5.2.3.

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Table 4 - Components of the ongoing cost deduction

Service	Description
<i>Water service</i>	
Mains repair and renewal	The costs associated with the repair and renewal of water mains, averaged over a 90 year asset life. The costs are based on market tested contractor rates.
Leakage detection	The costs of detecting on-site leakage. We have based these costs on UUW's PR19 business plan submission.
On-site water losses	On-site water losses impact the amount that is billable by the NAV relative to the water provided by us at the boundary. The components of this adjustment are set out in Table 5 below.
Water quality sampling	This captures the costs associated with taking and analysing a sample. We have used commercial rates, as opposed to the internal UUW rate, because this reflects what a NAV would pay.
Mains cleaning	The costs associated with the cleaning of on-site mains. This is based on market tested contractor rates.
General operations	This captures all manpower costs of operating the network. The manpower costs are fully loaded i.e. they include all on-costs.
Service pipe repair	This captures the cost of repairing the pipe that connects the water main with each property.
Regulatory enforcement	The costs associated with Regulatory Enforcement Officers.
<i>Wastewater service</i>	
Incident costs	The resolution and clean-up costs associated with sewer blockages and sewer collapses.
General operations costs	This captures the overall cost of a wastewater network, excluding the incident costs set out above.
Trade effluent compliance costs	The cost associated with trade effluent compliance. This will not be applicable to all NAV sites.
Pumping station costs	The NAV tariff includes a deduction based on UUW's average pumping costs.

All costs of the above activities are grossed up to reflect a contribution from UUW's corporate overhead. This is because we allocate overheads based on direct costs, which means that any avoided direct costs would result in a reduced overhead allocation.

We also include a discount for business rates in recognition that a NAV may incur such costs.

We have made some additional deductions to reflect on-site water losses. These are summarised in Table 5:

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Table 5 - On-site water losses adjustment

Water loss type	Description
On-site leakage	UUV's wholesale charges are set based on estimated leakage, meaning an adjustment is necessary as UUV will avoid costs associated with leakage on the NAV site. The leakage adjustment is based on an engineering assessment of expected leakage from pipes typical of those used on a NAV site.
Illegal use	Illegal use could have an impact on a NAV's ability to supply its customers. We assume that illegal use on a NAV site reflects assumed illegal use across the wider UUV network.
Standpipe use	Allows for unbilled standpipe use.
Use on construction sites	The NAV may need to supply water to building sites as the site expands.
Mains flushing	Water used during mains flushing, which is a result of a water quality contact.
Mains rehabilitation	Captures the flushing of new mains, as well as mains that have been cleaned, renewed or relined.

These factors are applied as a percentage reduction to the applicable tariff (i.e. the starting point tariff post-deductions.) this is because they reflect the proportion of volume of water that we would provide to the NAV that would not be billable by the NAV to its customers. We have calculated this adjustment to be 2.56%.

Our Select tariffs already include an adjustment that means large users do not pay the full cost of leakage. Therefore, we do not propose to apply the leakage component of the water loss adjustment to NAV Select tariffs. We propose to still include an adjustment for all other components of water losses against Select NAV tariffs.

We do not include an adjustment to reflect water used for firefighting use. The Water Industry Act 1991 requires that UUV provide a free supply of water for firefighting purposes, including to NAVs. Therefore, we propose that NAVs use existing channels<sup>2</sup> to recover the cost of firefighting use.

**Question 2** – Do you think we have identified all areas of avoided activity that should be reflected in the NAV discount? If not, then please explain what other areas of avoided activity we should consider.

## 5.2.3. Discounts relating to capital expenditure

We recognise that NAVs will incur capital costs relating to work carried out on-site. However, we note that incumbents have been required to pay an income offset to NAVs since April 2018<sup>3</sup>. This puts NAVs on a level playing field with Self Lay Providers (SLPs) and developers.

Therefore, we intend to compensate NAVs for capital invested on-site in two ways:

- Via provision of the income offset, which should negate the need for further capital cost-related discounts within the NAV tariff. (Otherwise, there is a risk that the NAV may receive a double discount.)

<sup>2</sup> NAVs can request this by emailing [NAVenquiries@uuplc.co.uk](mailto:NAVenquiries@uuplc.co.uk)

<sup>3</sup> The income offset is a contribution by the incumbent towards capital costs incurred on-site.

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- Via providing 100% discount for the meter standing charge component of the water service charge.

**Question 3** – Do you agree with our approach to compensating capital related costs via the income offset?

## 5.2.4. Working capital

We recognise that NAVs will have working capital requirements. Therefore, we have provided an allowance for working capital costs within our standard NAV tariffs.

We have calculated this component of the discount by assuming that the NAV bills its customers once every six months, and that U UW bills the NAV every month. This means on average a NAV may need a three month working capital allowance. We combine this information with the interest rate U UW applies to late payments (the Bank of England base rate plus 4 percent) to calculate the working capital allowance.

We do not provide an allowance for working capital costs for end user customers using more than 50 mega litres per annum, for whom the starting point wholesale tariff is one of our Select tariffs. The working capital allowance is intended to assist NAVs who take small value payments from a large number of customers. In the case of large user customers, we expect that NAVs will bill such customers monthly.

**Question 4** – Do you agree with our proposal to offer a working capital allowance?

## 5.2.5. Reconciliation of outturn customer numbers

Where a development is mixed, we will set the weighted charge for the coming charging year based on the NAV's forecasts of on-site customer numbers. We will request outturn customer numbers at the end of the charging year. A balancing debit/credit will then be applied against the following year's charges if the difference between forecast and outturn customer numbers causes a greater than 2.5% difference in the overall charge for that year.

## 5.2.6. The bulk supply meter

We intend to recover the costs associated with the bulk supply meter via an annual fixed charge, consistent with our wholesale charges scheme for an equivalent sized meter.

## 5.2.7. Sites with a trade effluent consent

Some customers on a NAV site may require a trade effluent consent. In most cases, we propose to assume that the effluent at the discharge point is not materially different from standard domestic effluent. However, we reserve the right to amend the charge if the site discharge deviates significantly from the assumed domestic strength of  $O_t = 707$  and  $S_t = 434$ . As noted in section 5.1, this would alter the starting point to be our wholesale trade effluent charges.

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We note that, other than in rare cases, the NAV is responsible for monitoring on-site trade effluent compliance. Therefore, where a NAV has a customer holding a trade effluent consent with the NAV, we are also proposing to apply an additional discount that recognises the additional costs involved. Our proposed deduction is based on U UW's trade effluent sampling and compliance costs.

**Question 5** – Do you have any comments on our approach to reconciliation of outturn customer numbers, the bulk supply meter or providing an additional discount to sites where a customer holds a trade effluent consent with the NAV?

### 5.3. United Utilities' indicative NAV tariff

We now present the indicative charges built using the described methodology.

Alongside this consultation, we have published an excel spreadsheet that demonstrates how we intend to apply these charges to specific NAV sites. We hope this will be a useful tool to help NAVs plan future business operations.

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## 5.3.1. Measured water charges

Water variable charges (2018/19 prices)	UWU wholesale tariff 2018/19	Market reform deductions	Ongoing cost deduction	Working capital allowance	Volumetric charge	Volumetric discount	Volumetric deduction per customer
<i>Units</i>	<i>£/m3</i>	<i>£/m3</i>	<i>£/m3</i>	<i>£/m3</i>	<i>£/m3</i>	<i>%</i>	<i>£/cust</i>
Household volumetric charge	1.725	-	0.187	0.018	1.519	12	18
NHH standard volumetric charge	1.740	0.048	0.198	0.018	1.476	15	66
Select 50 volume charge	1.362	0.038	0.002	-	1.323	3	3,000
Select 180 volume charge	1.125	0.031	0.0004	-	1.094	3	8,618
Select 750 volume charge	1.039	0.029	0.0001	-	1.010	3	35,032

## 5.3.2. Measured foul sewerage charges

Wastewater variable charges (2018/19 prices)	UWU wholesale tariff 2018/19	Market reform deductions	Ongoing cost deduction	Working capital allowance	Volumetric charge	Volumetric discount	Volumetric deduction per customer
<i>Units</i>	<i>£/m3</i>	<i>£/m3</i>	<i>£/m3</i>	<i>£/m3</i>	<i>£/m3</i>	<i>%</i>	<i>£/cust</i>
Household volumetric charge	1.125	-	0.036	0.013	1.076	4	4
NHH standard volumetric charge	1.163	0.031	0.045	0.013	1.074	8	22
NHH trade effluent volumetric charge	1.163	0.031	0.071	0.013	1.048	10	29
Select Sewerage	1.102	0.029	0.0004	-	1.073	3	2,175

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The water losses adjustment, as set out in section 5.2.2, is applied as a percentage discount to the final weighted tariff. This means it is not included in the volumetric rates. Please see the published spreadsheet "NAV tariff calculator" and Appendix 1 for more details.

The NHH trade effluent volumetric charge is applicable for a NAV which has a trade effluent consent on-site. We reserve the right to amend these charges should the composition of the discharge deviate significantly from the average UU strength of Ot = 707 and St = 434.

## 5.3.3. Standing charges

Water fixed charges (2018/19 prices)	Uuw wholesale tariff 2018/19	Discount	Fixed charges payable
<i>Units</i>	<i>£/customer</i>	<i>%</i>	<i>£/customer</i>
Household fixed charge (measured)	21.53	100%	-
NHH fixed charge for meter size 12/15 mm (0.5")	19.95	100%	-
NHH fixed charge for meter size 20/22 mm (0.75")	20.32	100%	-
NHH fixed charge for meter size 25/28 mm (1")	22.55	100%	-
NHH fixed charge for meter size 30/32/35 mm (1.25")	22.55	100%	-
NHH fixed charge for meter size 40/42 mm (1.5")	29.41	100%	-
NHH fixed charge for meter size 50/54 mm (2")	43.95	100%	-
NHH fixed charge for meter size 75/80 mm (3")	43.95	100%	-
NHH fixed charge for meter size 100 mm (4")	55.73	100%	-
NHH fixed charge for meter size 150 mm (6")	55.73	100%	-
Select 50 user fixed charge	18,900	2.77%	18,376
Select 180 user fixed charge	61,560	2.77%	59,853
Select 750/Plus user fixed charge	126,060	2.77%	122,565

The fixed charge for Select customers does not reflect metering costs. It reflects the volumetric charge that would have been levied against consumption up to the point at which the user becomes eligible for that particular Select tariff.

The only deduction we have made to the Select fixed charges has been to discount market reform costs. The discount for ongoing costs has been applied entirely against the volumetric Select NAV charge.

**Question 6** – Have we presented the tariffs in an accessible and transparent way or could this be improved?

## 6. Additional services

During our informal NAV consultation process, some NAVs expressed an interest in purchasing additional services from Uuw. We set out our view of what these services could be below.

### 6.1. Surface water and highways drainage services

Some NAVs may wish to drain on-site surface water (either from customer's properties and/or the internal road network) into Uuw's network. In these circumstances, we propose to charge NAVs according to the

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surface water and highways drainage charging policy as set out in our wholesale charges scheme. We would include the applicable surface water and highways drainage charges in the starting point, and apply the applicable wastewater volumetric discount.

## 6.2. Emergency and BAU services

During the informal consultation process, a number of NAVs expressed an interest in purchasing emergency services from U UW, with one NAV helpfully providing an example emergency service supply contract. Ofwat's guidance also raised an emergency service offering as a possibility. We are currently examining the practicalities of this, and to help with this exercise, we would welcome input on what particular services NAVs may like to receive. We note that NAVs have also expressed an interest in purchasing business as usual services.

We are not obliged to offer these services. However, we recognise the potential value of doing so and we are therefore considering offering a set bundle of emergency and BAU services across our region. The services included in this bundle would be standardised; all NAVs interested in this offering would receive standardised services and service levels. This will help us manage the network surrounding a NAV site effectively. We also intend to offer NAVs the same service levels we apply across our network. This means that an incident reported on a NAV site would be treated as if it had occurred on U UW's network, with the associated timescales for a response and resolution.

This offer of emergency and BAU services is subject to the operational practicalities involved.

**Question 7** – Do you have any comments on our approach to surface water and highways drainage services?

**Question 8** - What, if any, additional services could NAVs wish to purchase from U UW?

**Question 9** - Do you agree that the service levels for the additional services offering should be the same as those we provide on our own network?

## 7. Payment terms

We propose to use our standard payment terms for bulk supply agreements when billing NAVs. These terms state that payment is due either 15 days from the date of the invoice, or 30 days from the end of the billing period, whichever is later.

We propose to bill large use NAV sites on a more frequent basis. However, we may consider a longer billing period, subject to collateral being in place.

**Question 10** – Do you agree with our proposed payment terms?

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## 8. Other issues

We would like to hear from stakeholders about any other comments they would like to make about our proposals which are not covered in the responses to any previous questions.

**Question 11** – Do you have any other comments on our NAV tariff proposals?

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## Appendix 1 – United Utilities Water's indicative bulk supply NAV charges

### 1. Measured water charges

Water variable charges (2018/19 prices)	Uuw wholesale tariff 2018/19	Market reform deductions	Ongoing cost deduction	Working capital allowance	Volumetric charge
<i>Units</i>	<i>£/m3</i>	<i>£/m3</i>	<i>£/m3</i>	<i>£/m3</i>	<i>£/m3</i>
Household volumetric charge	1.725	-	0.187	0.018	1.519
NHH standard volumetric charge	1.740	0.048	0.198	0.018	1.476
Select 50 volume charge	1.362	0.038	0.002	-	1.323
Select 180 volume charge	1.125	0.031	0.0004	-	1.094
Select 750 volume charge	1.039	0.029	0.0001	-	1.010

### 2. Measured foul sewerage charges

Wastewater variable charges (2018/19 prices)	Uuw wholesale tariff 2018/19	Market reform deductions	Ongoing cost deduction	Working capital allowance	Volumetric charge
<i>Units</i>	<i>£/m3</i>	<i>£/m3</i>	<i>£/m3</i>	<i>£/m3</i>	<i>£/m3</i>
Household volumetric charge	1.125	-	0.036	0.013	1.076
NHH standard volumetric charge	1.163	0.031	0.045	0.013	1.074
NHH trade effluent volumetric charge	1.163	0.031	0.071	0.013	1.048
Select Sewerage	1.102	0.029	0.0004	-	1.073

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The water service volumetric charges published here do not include a percentage deduction for water losses. Non-large user tariffs will receive a 2.56% discount to reflect on-site water losses, while the Select tariffs will receive a 1.83% discount. This is because avoided leakage costs are already reflected in the Select tariffs. The difference between regular and large users means that applying the water losses discount to the tariffs in the charges scheme would be misleading where a weighted volumetric tariff is required. This would be the case where there are a mix of users on the NAV site. Instead, the water losses adjustment is applied when we weight the volumetric tariff. Section 5 gives an example of how to do this. The published tariff calculator also demonstrates the methodology used.

We reserve the right to amend our wastewater charges in the case where the composition of the foul discharge deviates significantly from the average U UW strength of  $O_t = 707$  and  $St = 434$ .

We will calculate the weighted volumetric rate each year depending on customer numbers on-site. NAVs should send us a forecast of on-site customer numbers before the charging year commences. This forecast will be used to calculate the weighted volumetric rate for the upcoming year. If outturn customer numbers varies from the forecast, and this variance causes a difference of more than 2.5 percent in the total NAV charge, we reserve the right to apply a true-up to the following years' charges.

## 3. Meter standing charges and large user fixed charge

Water fixed charges (2018/19 prices)	U UW wholesale tariff 2018/19	Discount	Fixed charges payable
<i>Units</i>	<i>£/customer</i>	<i>%</i>	<i>£/customer</i>
Household fixed charge (measured)	21.53	100%	-
NHH fixed charge for meter size 12/15 mm (0.5")	19.95	100%	-
NHH fixed charge for meter size 20/22 mm (0.75")	20.32	100%	-
NHH fixed charge for meter size 25/28 mm (1")	22.55	100%	-
NHH fixed charge for meter size 30/32/35 mm (1.25")	22.55	100%	-
NHH fixed charge for meter size 40/42 mm (1.5")	29.41	100%	-
NHH fixed charge for meter size 50/54 mm (2")	43.95	100%	-
NHH fixed charge for meter size 75/80 mm (3")	43.95	100%	-
NHH fixed charge for meter size 100 mm (4")	55.73	100%	-
NHH fixed charge for meter size 150 mm (6")	55.73	100%	-
Select 50 user fixed charge	18,900	2.77%	18,376
Select 180 user fixed charge	61,560	2.77%	59,853
Select 750/Plus user fixed charge	126,060	2.77%	122,565

## 4. Consumption assumptions

NAVs should apply the consumption assumptions set out here to determine the charge for each specific site. Section 5 gives an example of how to do this. The NAV tariff calculator published alongside this consultation allows NAVs to calculate the charge for a variety of sites.

## A consultation on United Utilities' proposed NAV tariff

NAV tariff	Per customer consumption
Household water NAV charge	88 m3/year
Household foul NAV charge	88 m3/year
Commercial standard water NAV charge	250 m3/year
Commercial standard foul NAV charge	250 m3/year
Select 50 water NAV charge	75,000 m3/year
Select 180 water NAV charge	278,000 m3/year
Select 750 water NAV charge	1,208,000 m3/year
Select foul NAV charge	75,000 m3/year

### 5. Worked example

A NAV would like to calculate U UW's charge for a commercial site with ten small user non-household customers and one large user customer. The large user would be charged using U UW's Select 50 tariff if it was in U UW's area. The small users would be charged according to U UW's non-household volumetric rate.

The NAV is only interested in purchasing a water supply from U UW.

The NAV will pay the Select 50 fixed charge, net of market reform costs, which is £18,376. We apply a 100 percent discount against all meter standing charges.

The table on the next page demonstrates how the NAV charge is calculated using the published tariffs.

UC on the calculation row stands for unit cost. The NAV should insert the relevant unit cost into this formula. For example, in column G, the ongoing avoided cost is calculated. The NAV should use the ongoing cost deduction from the published indicative charges in this calculation.

The volumetric rate for the site is calculated by dividing the total variable NAV charge in column K by assumed total on-site consumption:

$$£100,983.82 / 77,500\text{m}^3 = £1.303/\text{m}^3.$$

Therefore, the NAV will be charged £1.303/m<sup>3</sup> for every unit of water recorded at the bulk supply meter. This unit rate will not change if actual consumption differs from assumed consumption.

## A consultation on United Utilities' proposed NAV tariff

Reference	A	B	C	D	E	F	G	H	I	J	K
Variable charges per meter (2018/19 charges)	Assumed consumption	Customer numbers	Charge multiplier	UW wholesale tariff 2018/19	Total charge	Deduction for market reform costs	Deduction for on-site ongoing costs	Deduction for working capital costs	Assumed on-site leakage	Avoided cost of leakage	Variable NAV charge
<i>Units</i>	<i>m3/cust</i>		<i>m3</i>	<i>£/m3</i>	<i>£</i>	<i>£</i>	<i>£</i>	<i>£</i>	<i>m3</i>	<i>£</i>	<i>£</i>
Calculation	-	-	A x B	-	C x D	C x UC	C x UC	C x UC	C x leak %	$I \times (E - (F + G + H))$	$E - (F + G + H + J)$
Household volumetric charge	88		-	1.725	-	-	-	-	-	-	-
NHH standard volumetric charge	250	10	2,500.00	1.740	4,350.00	120.61	495.726	44.34	63.89	94.29	3,595.04
Select 50 volume charge	75,000	1	75,000.00	1.362	102,150.00	2,832.24	113.560		1,372.49	1,815.43	97,388.78
Select 180 volume charge	277,585		-	1.125	-	-	-		-	-	-
Select 750 volume charge	1,208,309		-	1.039	-	-	-		-	-	-
<b>Total</b>			<b>77,500.00</b>		<b>106,500.00</b>	<b>2,952.84</b>	<b>609.29</b>	<b>44.34</b>	<b>1,436.38</b>	<b>1,909.71</b>	<b>100,983.82</b>