

# CONNECTION CHARGES FOR DEVELOPER SERVICES IN ENGLAND

## ROOT CAUSE ANALYSIS

SIA PARTNERS

OFWAT

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## Executive Summary

Ofwat found large variations in new connection charges for on-site services and published its findings in its [May 2020](#) comparative analysis and consultation. Companies responded with various reasons as to why this may be the case, including both exogenous (outside of company control) and endogenous (within company control) factors. Ofwat was concerned that the variation was not a function of cost alone and concerns remained that the approach to setting charges followed by companies may be reducing transparency, predictability, and fairness, and leading to worse outcomes for customers.

We wanted to understand if the variation found in the May 2020 comparative analysis still exists and, where variation exists, we wanted to understand the causes. We wanted to test the extent to which the variation of charges was based on differences in methodology for recovering costs, or differences in the underlying costs themselves. Where there are differences in underlying costs, we wanted to test if this was due to different costs being recovered, or if it was due to cost drivers affecting companies in different ways. Our analysis is based on the written responses we received from the 15 English incumbent water companies and on cost and charges data for four hypothetical scenarios. Our findings should be interpreted in this context. Thank you to all companies involved in the Request for Information (RFI) and associated discussions for their helpful collaboration.

### Key findings

1. Large variation in charges exists across the 15 incumbent water companies in England for a set of common scenarios. We also found that some companies over- or under-recovered costs in some instances.
2. We found no single cause of the variation but have uncovered some interesting insights into how companies approach the developer services market, which may be contributing to variation of charges. These are captured in four themes as outlined below. These themes may in some instances mask the effects of each other and in other instances compound the effects of each other to create variation. For example, one company tenders for developer services alongside other activities, has low levels of SLP activity in its area, and has highly granular charges, all of which appear to lead to low charges for our scenarios. We identified a further two themes that were raised by several companies but that did not explain the significant variation in charges found in our quantitative analysis.
3. Overall SLP market share has grown from 26% of new connections made in 2018/19 to 34% in 2020/21. Eight of the 15 water companies have seen SLP market share in their areas grow year-on-year, including in areas where there were previously very low SLP activity and low charges. A further five companies experienced SLP market share growth in their area in 2019/20 followed by a decline in 2020/21, attributed by some to the impact of the COVID-19 pandemic. One company saw SLP market share decline in 2019/20 but then recover in 2020/21. One company saw SLP market share remain steady in 2019/20 and then decline in 2020/21. Our analysis indicates that the SLP market is influenced more by relationships between SLPs and incumbents, and SLPs and developers, the availability of sites in the region, and the geography of the region in relation to SLP bases, than by price.

### Four themes appear to be contributing to variation in charges

1. **Methodology for generating charges.** The methodology and balancing of principles that companies use to determine charges can have a material impact on charges and therefore levels of variation, depending on the scenario in question. Companies have adapted their charges and balanced the charging principles following consultation with customers. However, the variation in approach is contributing to variation in charges.
2. **Delivery models.** There is significant variation in how companies approach developer services, including levels of outsourcing, the number of contractors used, and the length of contracts. We did not find any obvious correlation between these factors and cost. However, poor scrutiny of contractor rates may be limiting the ability of companies to assure cost reflectivity of individual

charges. This is most apparent for companies that procure developer services alongside other activities.

- 3. Economies of scale.** Companies told us economies of scale reduce costs for those with large volumes of work and those that procure materials through a large contractor or procurement hub, resulting in lower charges. Smaller companies and those operating across several disconnected regions do not have access to this.
- 4. Overheads.** There is significant variation in overhead and administrative costs, most pronounced for larger developments. This is in part due to the inconsistent definition of overheads, as well as different interpretations of the elements of costs that it is reasonable to recover.

## Two themes appear to have little impact on variation of charges for the four scenarios we analysed

- 1. Regional labour costs.** Several companies told us that their location in the South East of England results in higher-than-average labour costs. Whilst there are certainly regional differences in labour rates, our analysis found that location did not explain the significant variation in costs.
- 2. Traffic management and council charges.** Several companies identified traffic management and council charges as a key driver of costs. In other scenarios with more onerous traffic management requirements, traffic management would certainly make up a higher proportion of costs, and the variation between companies would therefore be more significant. However, in this analysis large variation in costs exists despite minimal traffic management costs, so we do not consider it an explanatory factor of variation in this case.

## Next steps

- 1.** In its [November 2020 conclusions document](#), Ofwat said that cost reflectivity will become an explicit principle as part of updates to the new connections charging rules. Increased clarity around what is expected of companies in relation to cost reflectivity would be valuable, including the right level at which to assure cost reflectivity (e.g. across new connections services or per individual activity). Companies may look to improve their ability to assure that charges for new connections services are cost reflective. In particular, companies that tender for new connection services alongside other activities such as repairs and maintenance need to consider how they can assure that their new connections services reflect the actual costs incurred to deliver them.
- 2.** As outlined above, our analysis found that SLP market share has increased, often in areas with previously low levels of SLP activity, and non-price factors appear to be more important than price in driving SLP activity. Further investigation may be considered to improve understanding of the drivers of SLP growth at a regional level, including engaging with SLPs and developers to understand their views. Companies should continue to increase engagement with SLPs and developers and continue to support the SLP market, particularly in areas where SLP activity remains lower than average.
- 3.** We found that the significant variation of overheads present may in part be due to an inconsistent definition of overheads across the companies, as well as different interpretations of the elements of costs that it is reasonable to recover, with some companies not recovering costs such as central overheads. Further investigation may be considered to understand exactly what approach each company is taking to overhead allocation.

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# 1. Introduction

## 1.1. Background

The Charging Rules for New Connection Services (English Undertakers) that first came into effect in April 2018 are principle-based, giving water companies the flexibility to innovate in how their charging arrangements are structured whilst maintaining cost reflectivity. However, concerns have arisen at Ofwat that the rules allow for inconsistencies in terms of how charges are structured, and the levels of charges themselves. More specifically, there are concerns that charges are not cost reflective and that contestable charges being low may act as a barrier to competition.

To investigate the differences in charging levels for on-site services, Ofwat undertook a comparative analysis of the 15 English incumbent water companies' charging arrangements for 2019/20. The results of this analysis were published in a consultation in May 2020, inviting the water companies and other stakeholders to share their views on the findings. Companies raised a range of points in their responses to the consultation, including geographical factors and approaches to allocation of costs. As outlined in the conclusions of the consultation, published in November 2020, concerns remained at Ofwat around the variation in companies' charges and further analysis of costs and charges was suggested.

In parallel to this analysis, the findings of Ofwat's Review of Incumbent Company Support for Effective Markets (RISE) were published in August 2020. This study looked, in part, into the SLP market and found that the degree of support for the market from incumbents was widely variable.

To build on the results of these consultations, Ofwat commissioned this root cause analysis to investigate the variation in water companies' costs and charges for developer services and to determine the causes of variation.

## 1.2. Our Approach

This analysis was commissioned by Ofwat to understand the causes of variation of charges for new connection services. Ofwat wanted to analyse onsite charges for new connection services for water only, so this analysis does not include income offset and infrastructure charges. We wanted to get companies' views, building upon, and adding more detail to, suggestions they have made in response to prior consultations. We produced a list of questions split into three broad sections: costs, cost drivers, and determination of charges.

In the section on costs, we set out questions seeking to understand what companies saw as the underlying costs of delivering new connections services (which includes efficiency levels of the companies), how companies allocate costs across the services, how companies use contractors to deliver these services, and how they ensure value for money.

In the cost drivers section, we set out a list of the key drivers of costs that companies had raised in previous consultations. These broadly fell into the categories of natural and economic factors. We sought to get companies' views on the extent to which each factor affects their costs. We also asked companies to raise any further cost drivers that we did not mention. We wanted to understand what companies saw as the key reasons for variation in underlying costs.

In the section on determination of charges, we wanted to understand how companies translate the costs they incur into charges. We asked questions around the process for calculating charges, the averaging and bundling that takes place, how cost reflectivity is assured, and how the charging principles are balanced. We wanted to test if companies' approaches were leading to variations in charges.

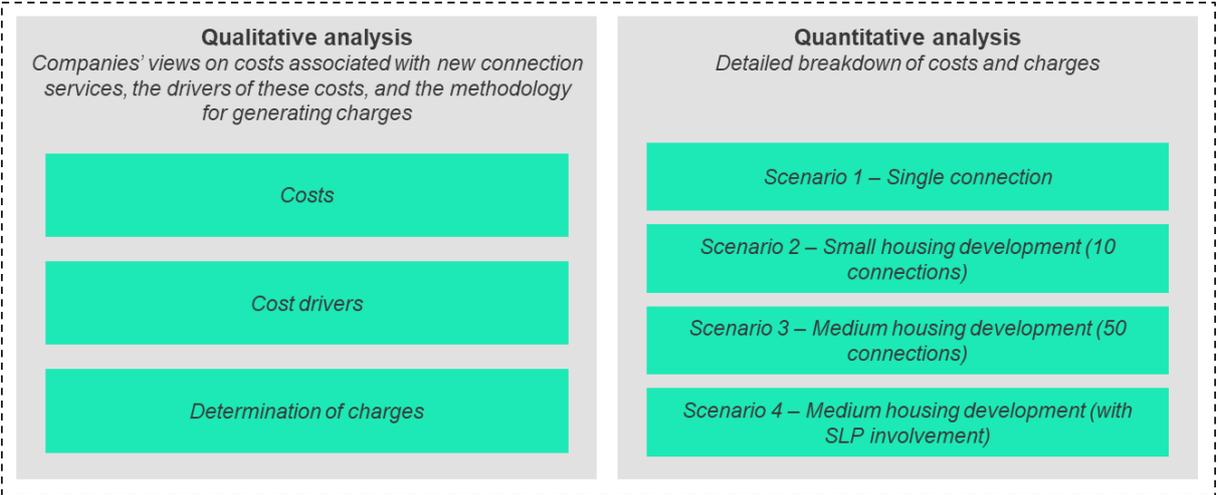
During the drafting of the above questions, we engaged with a sample group of companies selected from the wider group – Anglian Water, Severn Trent, South West Water, Thames Water and United Utilities. Thank you to those involved. These discussions enabled us to fine tune the questions we were asking.

As well as getting the views of the companies, we also wanted to gather data on some typical scenarios. The May 2020 comparative analysis looked at publicly available charges applied to worked examples for 12 different scenarios across single connections and housing developments with various surface types, pipe lengths and pipe diameters. The purpose of applying published charges to a range of scenarios was to allow comparison between companies on a standardised basis. Feedback to the consultation suggested that the high-level scenarios only went some way to revealing differences between companies and that more detailed scenarios would improve cross-company comparisons. In an information notice to companies in November 2020, *Expectations, assurance, and information requirements for water company charges for 2021-22*, Ofwat updated the guidance for the worked examples companies should use in their 2021/22 charging arrangements. These updates included more guidance around ancillary charges, clearly stating that they should include service pipe and boundary box fitting, excavation and reinstatement, and typical traffic management.

We selected four of the scenarios set out in the information notice for companies to provide the costs they would incur and the charges that would be levied to developers. We restricted the scenarios to onsite new connection and requisition costs. The four scenarios we selected were the single connection and 10 connection development, which are high volume works, and the 50-connection development, with and without SLP involvement, to provide us with a view of a larger job. Discussions with the group of companies supporting the design of the RFI made it clear to us that a further degree of detail would improve cross-company comparison. Without wanting to go into detailed designs, we decided to provide an additional level of detail on top of that provided in the information notice. Thus, for the four scenarios selected, we specified details such as the traffic management and council charge requirements, the absence of contamination, and the phasing of the works. Due to the additional guidance provided by Ofwat in the 2020 information notice, and the further guidance provided in the RFI as outlined above, the scenarios in this report do not exactly match those analysed in the May 2020 consultation.

The qualitative questions and the quantitative analysis of the four scenarios formed the basis of a RFI that we sent to the 15 incumbent water companies in England. A data sheet was produced for collection of the scenario data, to enable consistent presentation of responses. The structure of the RFI is conveyed in Figure 1 below.

**Figure 1 – Structure of the request for information**



In addition to the RFI, we also asked the companies to provide data on SLP activity. The May 2020 consultation looked into the relationship between levels of charges and SLP activity. Looking at 2019/20 on-site charges and 2018/19 SLP activity, as a proportion of new connections made by SLPs, the consultation concluded that there was no clear pattern between charges and SLP market share. We

asked companies to provide the same data on new connections made by SLPs in 2019/20 and 2020/21<sup>1</sup>. Following feedback from Thames Water and United Utilities to the May 2020 consultation and to this RFI, we have also looked at SLP activity in terms of the proportion of mains laid.

We analysed the RFI responses, identified key themes and insights from the companies, and tested these against analysis of costs and charges for the four scenarios and the SLP activity data<sup>2</sup>. We conducted follow-up discussions to validate certain elements of the analysis with Ofwat and the companies relevant to the particular insights. We also tested our insights with Cambridge Economic Policy Associates (CEPA), who were commissioned to complete a review of the approach to regulation of developer services at the price review in 2024 (PR24) and beyond, in parallel. These validation discussions provided important builds to the analysis and to the case studies within this report, explained further below.

This analysis has been distilled into six key themes. These themes contained the distilled perceptions from the companies, insights from the quantitative analysis, and case studies that take a deep dive into a single company. Of the six themes, four relate to possible causes of the variation and the remaining two themes are areas perceived as significant by several companies but did not appear to us to explain any variation in the quantitative analysis.

### 1.3. Related work

There are other topics within connection charges for developer services that could be considered as part of an analysis, such as income offset and infrastructure charges, but these are not within scope of this analysis. It is important to note also that there are several areas of work taking place in parallel to this analysis that will have an impact on how developer services are regulated in the future. These include:

- An analysis conducted by CEPA and Ofwat into the approach to regulating developer services at PR24 and beyond. This work will explore options for maintaining or reducing regulation of contestable connection services and consider how any changes may be implemented.
- The move towards including cost reflectivity as an explicit principle within the new connections charging rules. This is closely linked to the outputs of this analysis.
- Ofwat's consultation on the balance of charges. This [consultation](#) was published on 27 April and seeks views from the sector on the balance of costs recovered from developers and other customers (the balance of charges) and incentives for better outcomes for the environment and society (environmental incentives).
- Changes to how developer services are regulated in Wales. Ofwat has [consulted](#) on implementing charging rules for new connection services for companies wholly or mainly in Wales, replacing the existing framework set out in the Water Industry Act 1991.

### 1.4. Report structure

The remainder of the report presents our findings and recommendations in the following structure:

- Section 2 presents the findings from the analysis, including the levels of variation in charges and a breakdown, the levels of variation in costs and a breakdown, and the levels of SLP activity.

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<sup>1</sup> Data for 2020/21 is unassured and is representative of April 2020 – February 2021. SLP figures for Wessex Water for 2019/20 and 2020/21 are based on applications.

<sup>2</sup> Please note - parts of the RFI contained commercially sensitive cost information. This information has been treated as strictly confidential and this document has been created to include only that information that can be published. Any cost information included in this report has been anonymised. The data that sits behind this analysis will remain with Ofwat and continue to be treated as confidential subject to any obligation to disclose arising in the future, including under the FOI and EIR regime.

- Section 3 presents our insights from the analysis, namely the four key themes that we have identified. It also provides discussion around two potential drivers of variation raised on numerous occasions by incumbent water companies but with limited evidence in our analysis.
- Section 4 summarises the insights from the themes and discusses their interaction.
- Section 5 presents our suggested next steps.

## 2. What we found

### 2.1. Costs and charges

#### 2.1.1. The large variation in charges still exists across all scenarios

Our analysis has found that large variation in levels of charges exists across all scenarios. Some companies suggested that the large variation in charges found in May 2020 was related to the lack of detailed guidance around the scenarios, and that Ofwat's analysis looked at charges before the April 2020 rule changes. However, using the latest charging data in more detailed scenarios, large variation remains. The median, mean, maximum and minimum values are shown in Table 1.

**Table 1 – Summary statistics of costs and charges for the four scenarios<sup>3</sup>**

2021/22	Scenario 1 (Single connection)		Scenario 2 (10-house development)		Scenario 3 (50-house development)		Scenario 4 (50-house development with SLP involvement)	
	Costs	Charges	Costs	Charges	Costs	Charges	Costs	Charges
<b>Median</b>	£2,197	£2,093	£17,997	£17,997	£64,937	£65,038	£6,641	£6,554
<b>Max</b>	£3,684	£3,650	£35,118	£29,420	£109,217	£147,590	£15,404	£14,680
<b>Min</b>	£926	£926	£10,479	£10,479	£30,837	£39,216	£483	£483
<b>Mean</b>	£2,233	£2,181	£18,203	£17,847	£69,969	£72,630	£7,279	£7,148

In absolute terms, the largest variation in charges by far is for Scenario 3, the 50-house development. Here a developer may pay between £39k and £148k depending on location around the country. When considering the maximum charge as a proportion of the minimum charge, Scenario 4 has by far the greatest spread, with the most expensive company 30x higher than the cheapest. The next largest spread is Scenario 1 (most expensive 4x higher than least expensive), then Scenario 3 (3.75x higher), followed by Scenario 2 (3x higher).

There is also considerable variation between costs and charges for each scenario. This is most marked for Scenario 3, where the maximum charge is 35% higher than the maximum cost. It is interesting to note that there are instances where charges are lower than costs, suggesting that some companies may be under-recovering costs in certain scenarios. This is explored further in section 3.1.

#### 2.1.2. There is large variation in underlying costs that companies are incurring across all scenarios

The large variation in charges for each scenario appears to be driven by significant variation in the underlying costs that companies are reporting. As with charges, the variation in costs is largest for Scenario 3, ranging from £31k to £109k, but Scenario 4 has the largest variation relative to the mean.

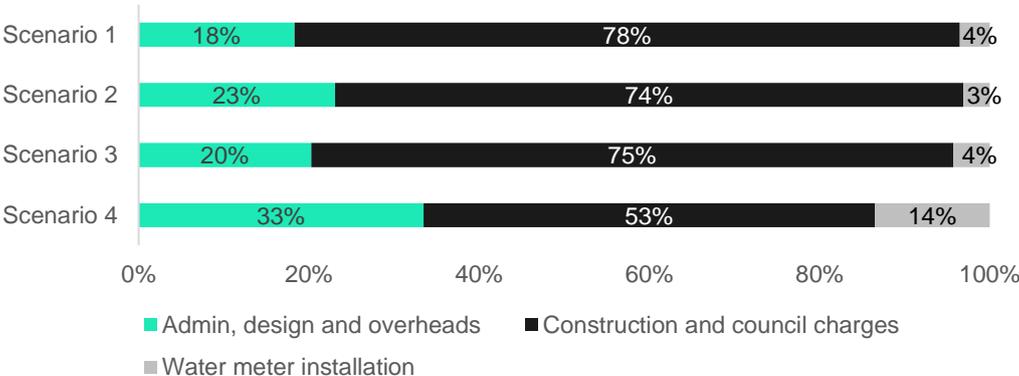
<sup>3</sup> The equivalent data can be found on pages 19 and 20 of the May 2020 comparative analysis. As described in section 1.2, there are minor differences in the scenarios analysed here versus those analysed in May 2020.

For each scenario, the level of variation of charges and costs is similar, meaning large variation is present even before costs are translated into charges.

**2.1.3. Construction costs make up the biggest element of costs**

We asked companies to provide a breakdown of the costs they would incur for each scenario. We categorised the costs into construction and traffic management, water meter and installation, costs to process application, design costs, and overheads. We found large variation in how costs are reported. Companies use different terminology to refer to the same activities and structure their costs differently. For example, companies include different costs within contractor costs (e.g., traffic management) and have different definitions of which costs are considered as costs to process application and which are included in overheads. This made direct comparison of granular cost elements challenging. However, it did give a good indication as to where the costs are incurred. We found that construction is by far the largest cost element, as shown in Figure 2.

**Figure 2 – Cost elements as a fraction of total costs**



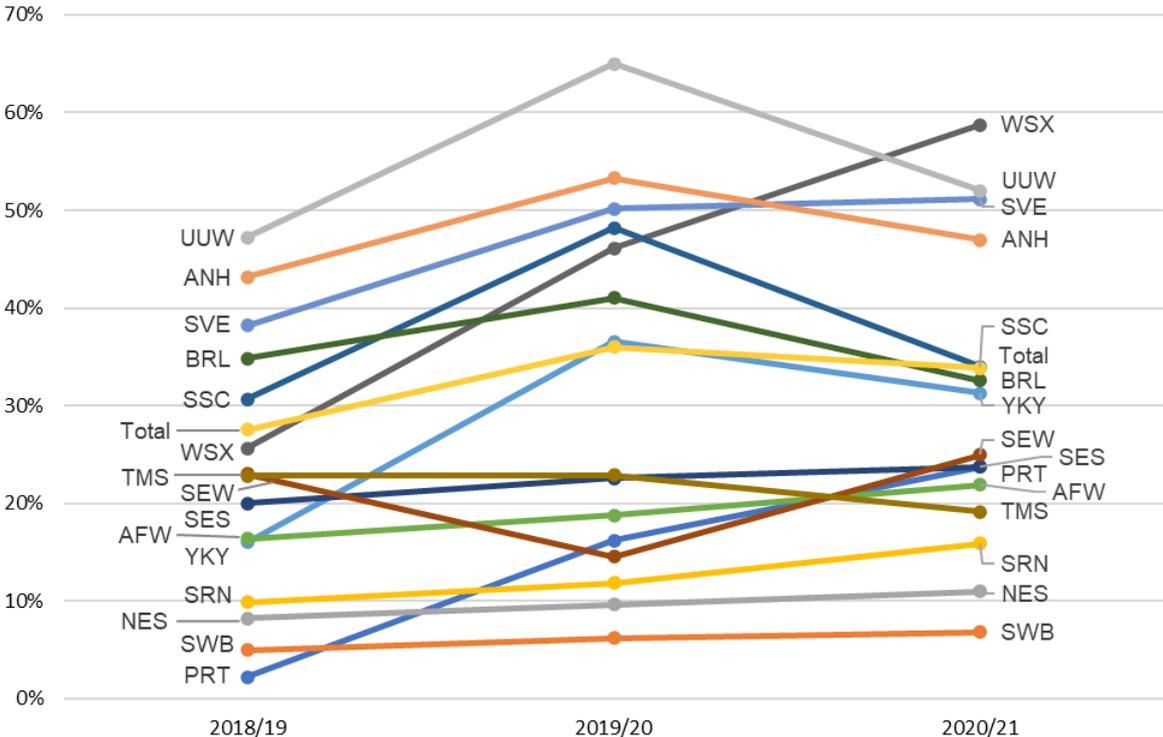
**2.1.4. Differing approaches to cost recovery may be contributing to variation in charges**

By comparing each company’s costs and charges for each scenario, we have analysed the percentage change that occurs as costs are translated into charges. This indicated that the way companies calculate charges does contribute to variation. Some difference between costs and charges is expected, given that the calculation of charges involves averaging across a number of variables. However, instances of over- or under-recovery made a material contribution to the variation in charges for those scenarios. For seven of the 15 companies, costs differed from charges by 5% or more for at least one scenario. This gap between costs and charges was most significant for Scenario 3. In this scenario, one company over-recovered costs by 35%, and another under-recovered costs by 11%. Two companies persistently under-recovered costs and one company persistently over-recovered costs across all four scenarios. This analysis is limited in the sense that the level of under- or over-recovery is heavily dependent on the scenario and we have only analysed four specific scenarios. For another scenario, the levels of under- or over-recovery of costs would be different. However, this in itself has enabled us to analyse how a company’s approach can affect cost reflectivity when a development is not typical for its region. This is explored further in section 3.1.

## 2.2. SLP Activity

As outlined above, we asked the incumbent water companies to provide data on the proportion of new connections and mains laid by SLPs in 2019/20 and 2020/21, building on the data collected for 2018/19 by Ofwat in the May 2020 consultation. In Figure 3 we have plotted how the proportion of new connections made by SLPs has changed since 2018/19. From 2018/19 to 2019/20, total connections per year by incumbents fell marginally from 146,309 to 130,087, whilst connections by SLPs grew from 52,492 to 73,149 per year. This represented an increase in market share for SLPs from 26% to 36%. From 2019/20 to 2020/21, total connections by incumbents fell to 96,170 and total connections by SLPs fell to 49,567, a fall in SLP market share to 34%.

Figure 3 – Proportion of new connections made by SLPs



Comparing 2020/21 with 2018/19, United Utilities, Anglian Water and Severn Trent remain amongst the companies with the highest number of connections made by SLPs. South West Water, Northumbrian Water, and Southern Water remain among the companies with the lowest share.

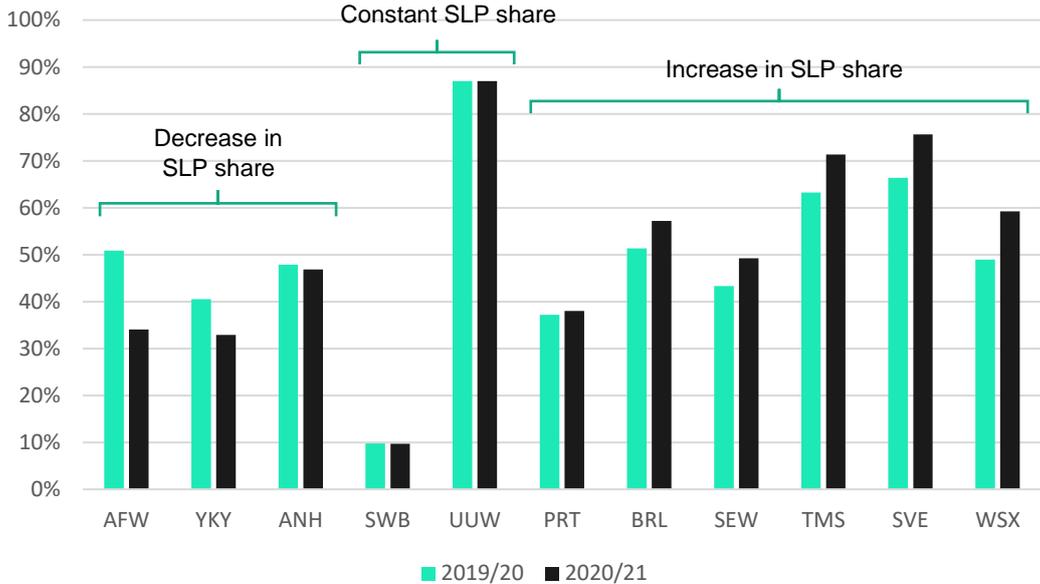
Some companies have seen SLP activity grow year-on-year. South West Water, Northumbrian Water, Southern Water, Affinity Water, and Sutton and East Surrey Water have seen modest growth in 2019/20 and 2020/21. Portsmouth Water, Severn Trent, and Wessex Water have seen large increases each year. Wessex Water in particular has seen SLP market share more than double, rising from 26% in 2018/19 to 59% in 2020/21. Note that South West Water’s Bournemouth region has seen far higher growth than the South West region – this is explored further in Case Study 1.

United Utilities, Anglian Water, Bristol Water, South Staffs Water, and Yorkshire Water saw increased SLP activity in 2019/20, but decreases in 2020/21. South Staffs Water has seen a drop from 48% to 34% this year. They told us that this drop can be attributed to the impacts of the COVID-19 pandemic and the ensuing lockdown. Large sites were forced to close in the first quarter, which affected SLPs more than incumbents because large sites make up a larger share of SLP activity than incumbent activity. This view was echoed by Anglian Water. Interestingly, South East Water saw the opposite outcome – with SLP activity falling from 23% to 15% in 2019/20 but rising to 25% in 2020/21. They told

us this was due to SLPs being focused on installing infrastructure in 2019/20 before the related connections could be installed the following year.

Another perspective on SLP market share is conveyed by looking at the proportion of onsite mains laid by SLPs in terms of length of mains, whereby the proportion of work conducted by SLPs is different due to differing lengths of main per connected property. In Figure 4 we have plotted this for 2019/20 and 2020/21.

**Figure 4 – Proportion of mains laid by SLPs**



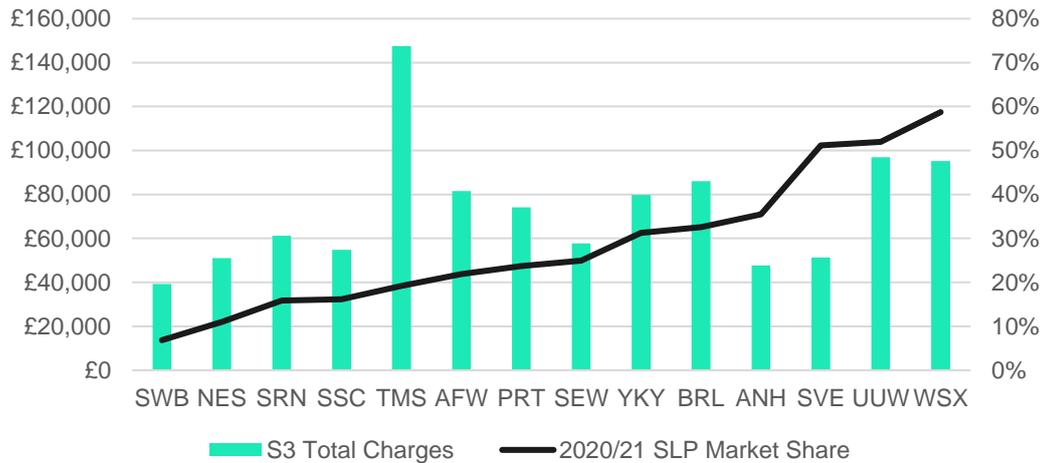
When viewing the proportion of mains laid by SLPs, United Utilities, Wessex Water, Severn Trent, and Bristol Water remain among the companies where SLPs have the highest share, and SLP market share actually looks higher in this view. The SLP market share in Thames Water's area looks a lot larger when assessing mains laid rather than new connections made, and has increased this year.

In terms of movement from 2019/20 to 2020/21 there are three groups. Six companies (Portsmouth Water, Bristol Water, South East Water, Thames Water, Severn Trent and Wessex Water) have seen increases this year in the porportion of mains laid by SLPs. South West Water and United Utilities have seen SLP market share remain constant. Affinity Water, Yorkshire Water and Anglian Water have seen SLP market share decrease this year.

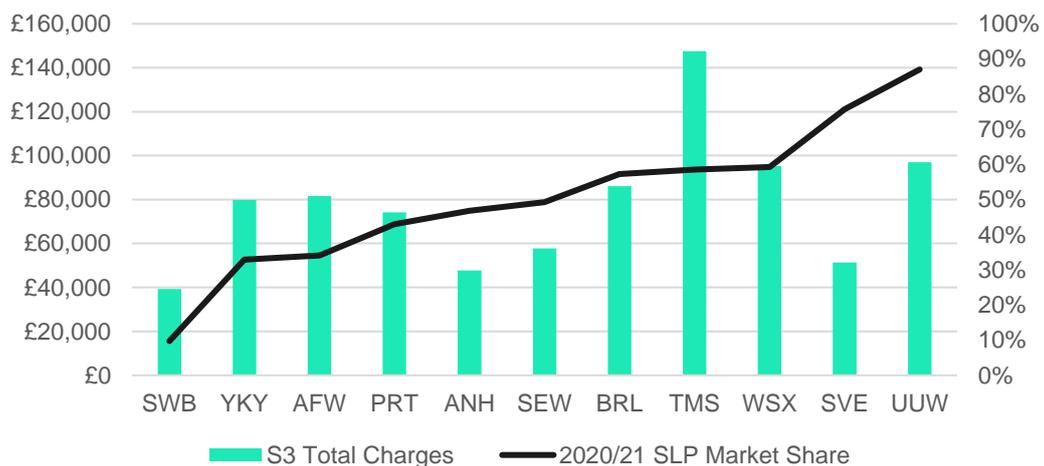
As well as considering how SLP activity has changed since 2018/19, we asked the incumbents how SLP activity affects charges. We would expect that where companies have low charges, SLP activity is lower, because it is harder for the SLPs to compete on price. Likewise, we would expect areas with higher charges to have higher SLP activity.

We compared charges for Scenario 3 with 2020/21 SLP market share, in terms of new connections made (Figure 5) and mains laid (Figure 6). We found some correlation between charges and SLP market share. Companies such as South West Water, Northumbrian Water, Southern Water, and South Staffs Water with Scenario 3 charges around or below £60,000 had SLP penetration below 20% in terms of new connections made. On the other hand, United Utilities and Wessex Water have charges above £95,000 and saw SLP penetration above 50%. However, there are apparent outliers. Anglian Water and Severn Trent have higher SLP activity than their charges would suggest, both in terms of the proportion of new connections made and mains laid. Thames Water has significantly lower SLP activity than its charges would suggest. As Thames Water have pointed out in previous consultations, this is less apparent when viewing SLP activity as the proportion of mains laid.

**Figure 5 – Comparison of SLP market share 2020/21 (new connections) and charges**



**Figure 6 – Comparison of SLP market share 2020/21 (mains laid) and charges**



One of the key concerns raised by Ofwat in the May 2020 consultation was that low charges may be acting as a barrier to competition. Since then, assuming that the variation in charges is not a function of cost alone, we would expect SLP activity to have increased more for companies with higher charges where SLPs can more easily compete on price. Table 2 below compares the total charges for the 50-connection development that was analysed in the May 2020 comparative analysis (2019/20 charges), against the percentage change in proportion of new connections made by SLPs between 2018/19 and 2020/21.

Contrary to the expectations outlined above, we have seen large increases in SLP activity for companies with some of the lowest charges in the May 2020 consultation. For example, Portsmouth Water and Wessex Water have seen the largest increases in SLP activity and were among the five companies with the lowest charges in the May 2020 analysis. This helps to confirm that price is not the only factor that influences SLP activity (which we consider in more detail in section 2.2.1). It is worth acknowledging that the figures for 2020/21 may be affected by the COVID-19 pandemic, as discussed above.

**Table 2 – Comparison of charges for 50-house development in May 2020 comparative analysis and percentage change in new connections made by SLPs for each company between 2018/19 and 2020/21**

Company	Total charges	Change in SLP activity
PRT	£38,041	477%
BRL	£38,912	-6%
SWB	£41,586	37%
SEW	£42,233	8%
WSX	£53,518	129%
ANH	£56,641	9%
SRN	£60,659	60%
SVE	£62,184	34%
NES	£62,673	34%
YKY	£63,543	95%
AFW	£74,371	34%
SSC	£74,882	-47%
SES	£77,306	19%
UUW	£78,451	10%
TMS	£103,710	-37%

### **2.2.1. Feedback from several companies suggests that SLP activity is increasing irrespective of the charges levied**

Feedback from several companies has suggested that there are other important factors that also influence SLP growth. The strength of relationships between the incumbent water company and SLPs, and between developers and SLPs, was raised as a significant driver of growth. For example, once an SLP has delivered works and started to develop relationships in a region, further growth is driven through repeat business.

The relationship between the incumbent and SLPs is a significant driver. A company, with a history as a multi-utility business, told us that it considered that this left them well-placed to build on previously developed relationships with the equivalent of SLPs for electricity connections. This has meant that SLPs may see them as more accommodating.

For smaller incumbents, this relationship effect may be more acute, given that the interaction between the company and SLP may well be between two individuals.

Other factors that were mentioned by companies that may influence SLP growth are the availability of sites in the region, and the geography of the region in relation to SLP bases. Affinity Water told us it thinks SLP penetration is limited because of the lack of large, greenfield development sites. As mentioned in Case Study 3 below, South West Water has seen large growth in SLP activity in Bournemouth, where SLPs now have a base, but not in Devon and Cornwall where they do not.

### Case study 1 – Different SLP outcomes in South West Water’s two regions

The two regions operated by South West Water have had very different outcomes since SLP activity was analysed in the May 2020 comparative analysis. In the South West region, SLP activity has remained low, with 4.4% of connections and 6% of mains laid by SLPs. In the Bournemouth region, SLP activity has rapidly increased – 2020/21 saw 20.2% of connections and 70% (by length) of mains laid by SLPs. This divergence has occurred despite the same charging arrangements and consistent levels of engagement from South West Water with SLPs in both regions.

South West Water sees the key issue in relation to SLP activity in the South West region as being the lack of SLPs based there. The remote geography of the Devon and Cornwall region means that any work could be prohibitively expensive (because of travel costs getting to and from the job) for organisations without a base in the region, particularly on the smaller, lower value development sites. Whilst SLP market share has grown significantly in neighbouring areas operated by Wessex Water, most of the developments in Devon and Cornwall are in conurbations much further south west, such as Truro, Plymouth, and Exeter. This increases the costs for SLPs based elsewhere to operate effectively when compared to the costs that South West Water’s incumbent contractor can offer, as they have resources and depots across the region. Conversely, in Bournemouth SLPs could access the region more easily and get a foothold in the market, which has grown into a large portion of activity.

South West Water are continuing to build relationships and support SLPs, for example by offering to procure smart meters of behalf of SLPs with no margin, with the intention of enabling SLPs to establish themselves in the market, or by suggesting to local contractors that they gain self-lay accreditation to enable them to compete in this market.

### 2.2.2. Increased SLP activity appears to increase the underlying costs of delivery for the incumbent

Increased SLP activity appears to increase costs for water companies in two ways. The first effect is that SLPs tend to take on the simpler (or higher value) developments, leaving the more complex, more costly, or less attractive sites to the incumbent, which has statutory duty to make connections. In their RFI response, five companies pointed out that when SLP activity increases in a region, the unit cost per connection increases for the incumbent water company. The second effect is that where SLP market share is high, the reduced volumes of work for the incumbent result in reduced economies of scale and therefore higher costs. This is explored in section 3.3.3.

A company, which has high SLP penetration both in terms of connections made and mains laid, has seen a reduction in the average number of plots and average length of mains per development. This, combined with an overall reduction in jobs, has led to higher unit costs. Wessex Water has reported that the significant growth in SLP activity since 2018/19, from 26% to 59% of new connections made by SLPs in 2020/21, is driving up unit costs. Portsmouth Water has also seen cost increases as a result of SLP activity, as outlined in Case Study 2 below.

For some companies, the market appears to be working in a reinforcing cycle. Higher SLP activity leads to higher costs for the incumbent, which in turn leads to the SLP being able to better compete and therefore increase activity. However, as mentioned above, this effect does not apply to all incumbents and there are outliers.

## Case study 2 – Increasing costs for Portsmouth Water due to increasing SLP activity

For Portsmouth Water, SLP activity has significantly increased year-on-year since 2018/19. The proportion of new connections has increased 12-fold from 2% in 2018/19, to 24% in 2020/21. The proportion of mains laid by SLPs was 38% for 2020/21. Portsmouth Water expects this growth to continue, based on SLPs' ability to provide increased levels of service and multi-utility offerings and secure repeat business.

The impacts of increased SLP activity have not yet affected their contractor rates for construction activities. However, it has led to a reduction in job volumes for Portsmouth Water. Due to their small size, this has not translated into fewer staff, so overheads have not decreased. This means the jobs that are completed by Portsmouth Water have a higher unit cost due to higher overheads per job, which results in higher charges.

In summary, there is some correlation in the data to support the notion that low charges result in low SLP activity. However, some of the largest growth in SLP activity over the last two years has been in regions that previously had some of the lowest charges, such as Portsmouth Water and Wessex Water. This quantitative data alongside responses from several companies appear to confirm that there are other factors that also drive SLP activity, besides price. Relationships between SLPs and incumbents, and SLPs and developers, the availability of sites in the region, and the geography of the region in relation to SLP bases all appear to influence the SLP market. There is evidence to suggest that higher SLP activity then leads to increase in the average costs reported by the incumbent. This can act as a reinforcing cycle, where increasing costs lead to higher charges, which make it easier for SLPs to compete. However, there are some companies that have consistently high SLP penetration and low charges, such as Anglian Water and Severn Trent, which suggests that other explanatory factors may be acting against any effect that SLP activity is having.

### 3. Key themes

As seen above, there is significant variation both in charges and in reported costs. The responses from companies do not indicate any clear understanding as to why the variation exists, and our analysis of both the qualitative and quantitative data did not find any single, definitive explanatory factor. Instead, we have identified six key themes. These themes contain the distilled perceptions from the companies, insights from the quantitative analysis, and case studies that take a deep dive into a single company. Four of these themes relate to possible causes of the variation:

1. Methodology for generating charges
2. Delivery models
3. Economies of scale
4. Overheads

The remaining two themes are areas perceived as significant by several companies in the RFI, as well as in responses to RISE and the May 2020 consultation, but were not found to explain any variation in the quantitative analysis:

1. Regional labour costs
2. Traffic management and council charges

We discuss each of these themes in turn below.

### 3.1. Methodology for generating charges

Respondents to the May 2020 consultation suggested that variation in charging levels is in part due to the way companies translate costs into charges and their resulting structure. In the RFI, we asked companies to explain the process they follow to determine charges for new connection services, how they build cost reflectivity into charges, and how services are bundled. By analysing the written responses and the difference between each companies' costs and charges we could understand how different methodologies affect charges.

As outlined in the section 1.1, the new connections charging rules give companies some flexibility in how charges are set. Companies may determine the types and values of charges being imposed, whilst reflecting the principles of fairness and affordability, environmental protection, stability and predictability, and transparency and customer-focused service. This gives water companies the flexibility to innovate in how their charging arrangements are structured whilst maintaining cost reflectivity. Unsurprisingly, companies have different approaches to balancing these principles, which affects how companies recover costs, and therefore the variation in charges for any given scenario.

All companies acknowledge the requirement to be cost reflective and build it into determination of charges. However, there are differences in how they interpret cost reflectivity and how it is balanced with other principles. The key dimension that companies differ across is the tension between predictability and transparency. This impacts how granular the charging arrangements are, which in turn affects the level at which companies seek to recover costs (e.g., contract level or component level). Granularity is a function of the degree of averaging and bundling that companies use to form charges. All companies use some form of averaging to form unit costs that feed into their fixed charges. At one end of the spectrum shown in Figure 7, companies can levy highly granular charges. At the other end, companies can use a high degree of averaging. Both approaches can claim to be cost reflective, but in different ways. We explain in more detail below.

Figure 7 – Spectrum of granularity of charges



There is also a tension between cost reflectivity and year-on-year stability of charging arrangements. This adds a temporal dimension to cost reflectivity – companies can have different interpretations of the period of time across which their charges will reflect costs. This is outlined further below in section 3.1.3.

#### 3.1.1. Some companies focus on achieving transparent costs through highly granular charging arrangements

Northumbrian Water, Portsmouth Water and Bristol Water take a granular approach to charging arrangements, with a larger number of unit charges that need to be combined to form an indicative price for a development. Northumbrian Water's charging arrangements include a longer list of charges that customers must pick from in order to calculate the charges for a given job. This approach means that the charges for any given scenario are likely to accurately reflect the costs incurred, because the charges are built up with components which directly reflect costs. Some smaller developers appreciate this granularity, and it spurs useful conversations with Northumbrian Water about individual cost elements, which acts as another source of scrutiny of costs.

However, this level of granularity comes at the expense of simplicity and predictability. Northumbrian Water says that developers have fed back that the variation that occurs between one job and the next makes cost forecasting more difficult and that the developers end up aggregating the unit charges into

average charges themselves. For this reason, Northumbrian Water has concluded that the charges are overly granular and a greater degree of averaging needs to take place.

### **3.1.2. Some companies emphasise predictability of charges through use of averaging**

Some companies told us that they strive to make their charges as predictable as possible. By using a higher degree of averaging, they generate charges that are an average of multiple variables. This means that the charges will be less sensitive to slight differences between developments. For example, for mains requisitions, South West Water bundles charges into a per-property charge. This is based on the annual meterage of mains laid, the number of connections, and the cost to deliver the meterage, resulting in the charge being based on the average length of main per connection.

South West Water told us that this approach was influenced by engagement with developers, who told them they wanted charges to be easy to calculate and transparent when looking at land purchase, to enable an early understanding of development costs, and that would minimise administration work in producing a quotation. They told us that this had been reviewed as part of recent engagement around 2021/22 charges and feedback from developers has led to them retaining this approach.

However, there is potential for over or under recovery of costs depending on the length of main per connection for a specific job. For example, in Scenario 3, the average length of main per connection was lower than South West Water's average, resulting in charges that over-recover costs. This highlights that our scenarios do not necessarily look like typical scenarios for South West Water. However, it also highlights how bundled charges can over or under recover costs when the requirements of the development vary. This is explored for Thames Water in Case Study 3. Most companies sit somewhere between the two ends of the spectrum mentioned above, using some degree of averaging to simplify charges for customers.

### Case study 3 – Thames Water’s approach to determining charges

Thames Water has received feedback from stakeholders that they favour simple, predictable charges that are easy to understand and do not significantly change from project to project. Operating across a large area with lots of variables, this places a requirement on Thames Water to average their costs to generate predictable charges.

When determining charges, Thames Water applies several steps of blending to make the final charges as simple as possible. Some of the key aspects of this blending are detailed below.

- Thames Water covers three regions: North London, South London, and Thames Valley, each with its own contractual arrangements and schedule of rates. Given that a project will be delivered against just one of the schedules of rates, there will always be some discrepancy between charges and costs incurred. The degree that costs and charges differ will depend on the region.
- Traffic management and council charges are another area of significant averaging. Thames Water covers more than 50 local authorities, with substantial cost differences between each. There are also lane rental charges specific to London, Oxford, Surrey, and North Kent. To simplify this for customers, Thames Water includes average traffic management costs within their standard charge. The impacts of this on cost-recovery were evident in our analysis. Scenario 3 involved 2-way lights for a 50-connection development. This was significantly below the standard traffic management that would be required for a 50-connection development in Thames Water’s area, so the average traffic management included in their charges significantly over-recovered on the costs to deliver the scenario.

Once charges have been determined, they are reconciled against total costs based on the assumed work mix. This reconciliation is done separately for contestable and non-contestable activities as no blending of contestable with non-contestable activities occurs. Thames Water can therefore assure that their charges are cost reflective overall, but due to the blending that takes place, the charge for each individual activity is not necessarily cost reflective.

#### 3.1.3. Prioritising stability can reduce short-term cost reflectivity

A strong focus on year-on-year stability of charges has resulted in a reluctance in some companies to dramatically increase charges. When contractor rates increased, one company decided to phase in the increase over several years, to avoid significant increases in a single year. This provides greater stability to customers but leads to under-recovery of costs over the short-term. Likewise, another company told us it is aware that its charges are not fully cost reflective in the short term but has a multi-year approach to closing the gap by making small adjustments to charges and improving efficiency each year.

In summary, the methodology that companies follow to translate costs into charges depends on their interpretation and balancing of the charging principles and on their customers' preferences. This ultimately determines how they recover costs. In general, the variation in interpretation of charging principles is to be expected, given the open nature of the rules. However, it is important to recognise that the varying approaches adopted by different companies leads to different approaches to cost reflectivity. When comparing charges and costs for defined scenarios, the varying approaches increase levels of variation of charges.

## 3.2. Delivery models

In Ofwat’s conclusions in project RISE, contractor rates were identified as a potential cause of poor cost reflectivity of new connection charges, if companies do not properly scrutinise them. In the RFI we asked a number of questions to understand the different delivery models that companies use to deliver developer services. We asked for information on how external contractors are procured, how contracts

are structured, and how rates are assured to be cost reflective. We wanted to understand to what extent the delivery model is correlated with charges, and the level of understanding that each company has of its contractors' rates and their cost reflectivity.

There are several variables that companies can choose from when designing the model that they use to deliver developer services. The activities that they choose to contract out, the type of contract that they use, the number of contractors used, the length of contract, and the level of scrutiny that they have of actual costs incurred, all differ between the companies. There appears to be limited correlation between each of these variables and total costs and construction costs. However, both the level of scrutiny that companies have of costs, and contract type as a function of this, have an important role in terms of ensuring rates are cost reflective.

### **3.2.1. There is significant variation of levels of outsourcing across companies, but we did not find any correlation with costs**

We asked companies to describe the developer services activities that they contract out within construction, design, and administration. We also asked the companies in the quantitative analysis to indicate whether each element of costs was outsourced or insourced. Combining these two sources of information gave us a view of the profile of works that companies contract out. We found differences between the companies along a sliding scale from fully insourced to fully outsourced. On one side, one company is almost entirely insourced and uses external contractors mainly during high demand periods. Two companies have a portion of construction activities outsourced. Most companies sit towards the fully outsourced model. Of the remaining companies, nine have outsourced construction activities and three have outsourced both construction and design. However, we did not find any link between the level of outsourcing and costs when looking at total costs and at construction costs specifically for each scenario.

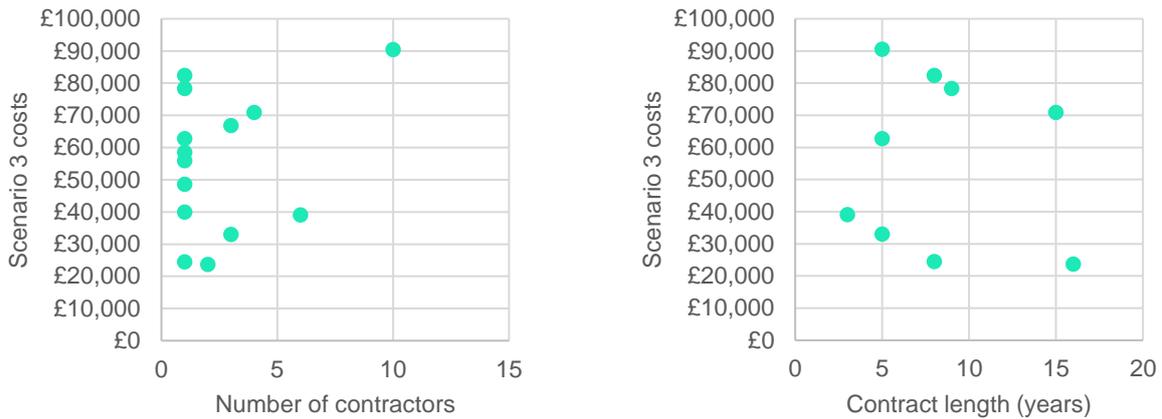
### **3.2.2. The number of contractors and the length of contract do not appear to be significant drivers of costs**

Companies take different approaches to contract length and to the number of contractors used, but we found limited correlation between these factors and cost data in the scenarios. Nine companies use a single contractor for all outsourced activities, with the remaining using between two and 10 contractors. When construction costs were analysed, the companies using more than one contractor occupied both the upper and lower ends of the spectrum. Contract lengths range from three to 16 years, but we found no indication that it affects construction costs. Figure 8 below indicates the varying approaches to contract length<sup>4</sup> and number of contractors used and the limited impact on costs that they appear to have.

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<sup>4</sup> Contract length data only available for nine companies.

**Figure 8 – Scenario 3 construction costs for each company versus number of contractors and contract length**



### 3.2.3. Poor scrutiny of contractor rates may be hindering cost reflectivity of individual charges

A key procurement decision for companies is whether to use a fixed schedule of rates for activities, or to use target costs, which involve a mechanism for sharing savings or overruns against an agreed target. South West Water, Anglian Water and Bristol Water use target cost contracts. South West Water’s model is explored in Case Study 4 below. It is unclear whether using target cost contracts leads to lower costs - South West Water and Anglian Water are among the companies with lowest charges across the four scenarios, but Bristol Water is among the highest. However, this model does lead to a high level of scrutiny of contractor costs. Target cost contracts require the company to have a strong understanding of the expected cost to deliver each activity, to enable accurate estimation and negotiation of the target cost. This means that they can have a high degree certainty that contractor rates are cost reflective.

#### Case study 4 – South West Water’s approach to contracts

South West Water has low charges in our quantitative analysis across the four scenarios. For Scenario 3, it has the lowest charge, 40% lower than the median. It also has a unique approach to contracting, whereby for new service connections it has a fixed price schedule of rates and for mains requisitions it has a target cost contract. South West Water has a single contractor to deliver new connection services across Devon, Cornwall, and Bournemouth.

Using a fixed price contract for service connections provides predictability and cost assurance for low cost, low risk jobs, and reduces unnecessary administration. Using target costs for mains-laying introduces a pain/gain mechanism should the contractor outperform or underperform against the target. Mains-laying tends to be more expensive and higher risk work than making connections, and the target cost model incentivises the contractor to deliver them efficiently with the incumbent water company receiving some upside from any savings. This has led to the contractor striving to use innovative, lower-cost options wherever possible, such as tunnelling instead of digging up roads.

In RISE, Ofwat outlined that taking contractor rates as cost reflective because they are externally tendered is not sufficient. Ofwat reported that only Thames Water explained in detail how they audit contractors’ costs to ensure their charges are cost reflective<sup>5</sup>. We found that several companies have mechanisms in place but there are still several companies that do not scrutinise robustly contractors’ costs.

<sup>5</sup> Page 40 of Review of Incumbent Support for Effective Markets - <https://www.ofwat.gov.uk/regulated-companies/markets/review-of-incumbent-company-support-for-effective-markets/>.

Besides the companies outlined above that use a target cost model to ensure scrutiny of costs, other companies have a right-to-audit clause built into their contracts. Severn Trent told us it regularly reviews actual costs incurred to ensure that contractor rates reflect costs. Affinity Water has a new contract for 2021/22, in which they report they have made significant improvements in the level of scrutiny that they have over contractor costs. Case Study 5 explains the Affinity Water approach in more detail. Those companies that do not scrutinise contractor costs can have less confidence that their contractor rates are cost reflective.

### **Case study 5 – Affinity Water’s improvements to transparency in new contract**

Affinity Water has taken the opportunity to tender the new contract for its central region to more effectively provide assurance that its contractor rates are cost reflective.

The company told us the tender process involved extensive commercial analysis, including pricing against new connection charge scenarios. Affinity Water repeatedly instilled to the bidders the requirement to ensure rates are cost reflective and requested upfront transparent submission of overhead rates, resulting in reduced overheads versus the current arrangements.

The new contract also includes a right-to-audit clause, allowing Affinity Water to audit actual costs against the schedule of rates at any given point to test cost reflectivity. This will facilitate a rate review each year when charges are renewed, at a minimum.

This approach will increase Affinity Water’s ability to assure the cost reflectivity of individual contractor rates.

### **3.2.4. Procuring for developer services work alongside other activities may reduce costs but also reduces transparency**

As explored further in section 3.3, procuring for larger volumes of work can result in lower unit costs. Our analysis found that four companies with smaller volumes of developer services work aim to exploit economies of scale and scope by tendering for developer services work alongside other activities. The primary activities that companies tender alongside developer services are water networks repairs and maintenance. This has apparent benefits for the incumbents, who are able to secure lower costs for both developer services and other activities by packaging them together. This is particularly beneficial for smaller companies who have small volumes of work to tender for – by packaging work up like this they secure greater value for money. The four companies using this packaging of work have lower construction charges and lower total charges than other similarly sized companies. It is important to note that other companies tender for developer services alongside other activities in the same contract but use different contract lots and separate rates for each activity.

However, this joint procurement raises the question of transparency, as these companies are likely to have less certainty that the rate for each service reflects costs, compared with other approaches. As outlined in RISE, contractors providing a basket of services may not be reflecting costs of the individual services within that. There is then the potential that developer services are cross-subsidising or are being cross-subsidised by other activities. One company told us that more than 90% of the work on its contract relates to repairs and maintenance rather than developer services. This means that combining them in a joint procurement likely has a larger impact on and increases the uncertainty of developer services costs.

It is not clear that packaging developer services with repairs and maintenance necessarily results in lower costs for both service connections and mains requisitions. Northumbrian Water told us that since taking service connections out of a contract of this type and delivering in-house instead, costs have decreased.

There is no clearly correct approach here, but the companies that do package developer services with other activities will tend to have less transparency. This may be affecting the market by allowing

companies to set lower charges than would be possible if developer services were contracted out separately and may have the potential to make it harder for SLPs to compete.

In summary, whilst there is significant variation in how companies deliver developer services, we did not find any clear indication that this explains large variations in costs. However, the level of scrutiny that companies give contractor costs is varied, which could have an impact on charges. Companies with target cost contracts or contracts with right-to-audit clauses have the mechanism for reviewing the actual costs incurred and assuring that contractor rates are reflective of them. Companies that do not have this level of transparency of actual costs incurred may not have the same level of assurance. Transparency of contractor rates is also reduced for companies that contract developer services alongside other activities. These companies can secure economies of scale and scope, thus reducing costs, but cannot always assure that these contractor charges reflect the actual cost to deliver each service.

### 3.3. Economies of scale

In response to the May 2020 consultation, some incumbents identified economies of scale as a potential cause of variation of charges. In the RFI we asked the incumbents to tell us the extent to which the size of the incumbent company and the associated economies of scale affect costs. We also asked how productivity affects costs. Several responses indicated that economies of scale are seen by companies as a key cost driver. It was also raised in relation to other cost drivers such as materials and contractor costs, with companies clearly viewing company size and the associated volumes as a key underlying factor.

#### 3.3.1. Larger companies with higher job volumes appear to benefit from lower labour and materials costs

The volume of work for which a company tenders for contractors and purchases materials can affect their costs. Some companies have a large volume of works due to their size and appear to benefit from strong purchasing power. This is evident in the quantitative data. Anglian Water and South West Water's scale appears to lead to lower costs. The benefits of scale are most apparent in Scenario 3, where costs are highest. For Scenario 3, of the nine companies with separately identifiable labour costs, larger companies had lower labour costs. Thames Water and United Utilities appear to be outliers, with high costs despite their potential economies of scale. This may be masked by other factors that have not been identified in this analysis.

Anglian Water told us that some of the potential economies of scale that they might access are somewhat muted by other factors. The low availability of skilled technical resources, strained by numerous large scale infrastructure projects in the region such as Hinkley Point C and HS2, has seen increased competition and therefore increased rates. These factors may also be affecting other companies.

Companies that use national contractors for construction activities may benefit from economies of scale also. Contractors that procure materials for works across the country will benefit from this scale and have the potential to pass on some of this value to the incumbent water companies. Therefore, incumbent companies of all sizes may be able to benefit from economies of scale through the materials procured. Larger companies can benefit from both their own scale of work volumes as well as their contractor's economies of scale for materials, whilst smaller companies can only benefit from their contractor economies of scale.

Several smaller companies cite their lack of scale as a key driver of higher costs. Four companies told us they suffer due to their size. They offer smaller contracts and procure materials in smaller quantities than larger companies. However, not all smaller companies are held back by their relative size. For example, Bristol Water told us they have joined the Western Procurement Hub. This is a group of small

utilities in the area that procure materials as a collective, thus increasing quantities and decreasing unit costs.

### **3.3.2. The geography of a region may inhibit economies of scale**

The geography of the companies' regions can affect economies of scale. Companies with more than one non-contiguous region have seemingly larger volumes of work but cannot achieve efficiencies due to the separate nature of the regions. South Staffs Water told us that this affects labour, materials, and overhead costs for them. Wessex Water told us that their economies of scale are inhibited by geography. Their region is made up of uniformly sparsely populated catchments with no major conurbations. This results in primarily medium sized, dispersed developments which offer fewer opportunities to realise economies of scale.

### **3.3.3. Increased SLP activity can also limit economies of scale**

Companies that have higher SLP penetration report that they have reduced volumes and higher complexity work to offer contractors. SLP involvement also affects the average site sizes and the related economies of scale.

In summary, companies with larger volumes of new connections activity can benefit from economies of scale by securing lower contractor rates and materials costs. Smaller companies and those operating across several disconnected regions do not have access to this value and therefore experience higher costs. There are options these companies can consider, as Bristol Water has evidenced with its use of procurement hubs. For some companies, there may be competing factors that mask or offset the potential benefit of economies of scale. Larger companies with non-contiguous regions or high SLP penetration may not be able to access these benefits. Alternatively, smaller companies that procure as part of a local procurement hub, or use national contractors that procure materials at scale, may be able to access some benefits of scale despite their size.

## **3.4. Overheads**

Responses to the May 2020 consultation and to RISE suggested that the allocation of overhead costs could be a cause of variation in charges. We asked the incumbent water companies what overhead costs apply to new connection services and how they are allocated across services. We also asked all relevant overheads to be included in the quantitative scenarios. We wanted to understand if variation in charges is caused by variation of overheads and if companies are recovering the same costs.

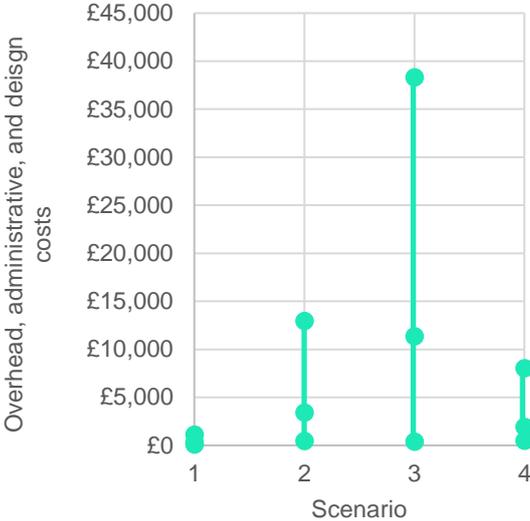
### **3.4.1. The definition and calculation of overheads vary significantly between companies**

The definition of overheads as they relate to developer services does not appear to be consistent across the water companies. Most companies include some form of central overhead covering office space, IT, and back-office support functions such as finance. Costs for administration and design contribute to the provision of service but are to an extent fixed regardless of output. Some companies define and report these as overheads whilst others keep them as separate direct costs and there is significant overlap between them. We have therefore included costs that companies reported as administrative or design costs within the analysis of overheads to make for a fair comparison.

There was significant variation in how companies reported overheads in the quantitative analysis. We found that five companies did not have any separate overheads, instead including them in construction rates. Despite all 15 companies using external contractors to some degree, only five companies had separately identifiable contractor overhead costs. One company had separate overheads related to the

storing of materials. One company told us that they reported overhead costs as a balancing item in the RFI, applying them as a final step in the calculation to make up the difference with charges. This may indicate that there is some clarity or consistency lacking in the approach to allocating overheads. Figure 10 shows the median, maximum and minimum costs for overheads, administrative costs, and design costs, for all companies across each scenario.

**Figure 10 – Median, maximum, and minimum costs for overheads, administrative costs, and design costs**



The variation is most marked for Scenario 3, varying from £400 to £40,000. The general approach adopted by all companies to some extent is to apply overheads to activities as a percentage uplift according to the cost of the activity, so it is unsurprising that overheads increase as the size of the development increases. However, the increases are non-linear, with Scenario 3 in particular having disproportionately higher costs. Of the five companies with the highest overhead, administrative and design costs for Scenario 3, contractor overheads made up the biggest element for three of them. The variation is likely to be linked to some extent to the inconsistent definition and allocation of overheads as outlined above. For example, overheads for some companies may appear artificially low because some overheads are included in their construction costs.

Each company uses different methodology for applying overheads. For example, some companies apply a flat fee to service connection costs, but others apply a percentage uplift. Some companies have a complex structure of direct and indirect overheads applied differently to different cost elements, which is not simple to breakdown and understand.

**3.4.2. This variation may in part be due to companies recovering different costs**

Our analysis did not find any clear correlation between the types of overhead costs recovered and the levels of charging variation. However, there were some interesting anomalies that are contributing to variation on a company-by-company basis. For example, we found that South East Water does not currently recover any central overheads. Overheads are only recovered through an application fee and administration fee, which relate to the costs associated with processing the job. It does not recover costs associated with, for example, the costs of the building or HR and other central support services, though this is currently under review.

We also asked companies about any margin earned on new connection services. Several companies acknowledged that whilst they do not apply a margin, their contractor will do either as a separate management fee or as part of the overheads. Of the 15 companies we spoke to, two told us that they include a profit margin on top of any charges applied by contractors. For one of these companies, this

was set at 4% of costs. This is an additional element of cost that the majority of companies do not include in their charges.

In summary, there is significant variation in the levels of overheads costs reported by companies in the RFI. This is in part due to the inconsistent definition of overheads and the differences in how they were reported in the RFI. Companies also have different interpretations of the elements of costs that it is reasonable to recover. This varies from companies not recovering any central overheads through to companies recovering a margin on top of other costs. This contributes to variation in charges. More analysis is needed to understand if companies are including the same costs within central overheads and to understand the impact that different overhead calculation methods have on costs.

## **3.5. Regional labour costs**

The impact of regional labour costs was looked at in detail at PR19. Several companies identified it was a driver of variation in their responses to the May 2020 consultation. We asked companies to describe the extent to which labour costs affect overall costs to deliver new connection services.

### **3.5.1. Companies in the South East perceive regional labour markets to be a key driver of costs**

Of the 15 responses, six companies identified their location in south east England and their proximity to London as leading to higher labour costs. Affinity Water, Anglian Water, Sutton and East Surrey Water, and South East Water highlighted that the local job market is extremely competitive in their areas, resulting in higher wages and higher turnover. Thames Water pointed us to analysis performed as part of PR19 that covered the discussion of labour costs in their region versus the national average, estimating that they experience 10-15% higher labour costs.

Operating in both north east and south east England, Northumbrian Water told us they can see first-hand the regional impact on costs. Their regions in the South East see higher in-house labour and contractor costs. This is more pronounced for construction work. Therefore, their design and administration charges are the same in the north east and south east, but they have different construction charges.

### **3.5.2. Our analysis found limited correlation between costs and region**

Looking at total costs across all scenarios, the companies located in the south east that raised the issue of higher labour costs are spread across the range of costs. The five companies with highest costs across all scenarios are located across the country. Only one is in the South East. Thames Water has estimated their labour costs to be 11% higher than the national average but an 11% reduction to their total charges would still leave them with the highest overall charges for all scenarios. When analysing construction costs, nine companies had separately identifiable labour and materials costs. Of these companies, there was no indication that being located in the South East resulted in higher costs. Of the nine companies, the most and least expensive were located in the south west. All else being equal, this suggests that location is not a strong explanatory factor.

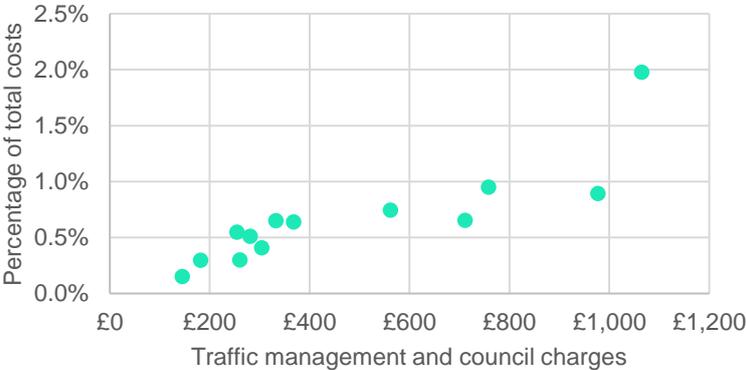
In summary, several companies told us that their location in the south east of England results in higher-than-average labour costs. On the other hand, another company told us that its analysis as part of Ofwat's cost assessment working group consistently found that labour costs are not a useful explanatory factor for variation in costs. Whilst there are certainly regional differences in labour rates, our analysis found that location did not explain the significant variation in costs visible in the scenario data.

### 3.6. Traffic management and council charges

As with regional labour costs, traffic management costs were raised in previous consultations as a potential driver of variation of charges. In the RFI, we asked companies to describe the extent to which traffic management costs and council charges affect overall costs (and hence charges) to deliver new connection services. In the quantitative analysis, we specified the same traffic management requirements for all companies to test how the costs vary around the country and to measure their impact on charges.

Several companies outlined that high variation of traffic management costs, permits and council charges exists both within their regions and across the country. Lane rentals were also raised as a key driver of variation, as they disproportionately affect companies that operate in major conurbations, primarily London. This variation in costs was most apparent in Scenario 3. Figure 11 plots the traffic management and council charges for Scenario 3 against the proportion of total costs that they make up.

**Figure 11 – Traffic management and council charges versus the proportion of total costs that they make up for each company**



For the scenarios we analysed in this report, traffic management costs do not explain the large variation in total charges between companies. The company with the most expensive traffic management and permitting costs was incurring 10x the costs of the company with the least expensive costs (£1,065 vs £145). However, even for the companies paying the highest traffic management costs, it is a low fraction of total costs. At the lower end, it is 0.2% of costs. At the upper end, it is just 2% of costs.

In other scenarios with more onerous traffic management requirements, traffic management would certainly make up a higher proportion of costs, and the variation between companies would therefore be even more significant. However, in this analysis large variation in costs exists despite minimal traffic management costs, so we do not consider it a strong explanatory factor of variation in this case.

## 4. Conclusions

Our analysis has found that large variation in charges exists across the 15 incumbent water companies in England for a set of common scenarios. The large variation in charges for each scenario appears to be driven by significant variation in the underlying costs that companies are reporting. There is also considerable variation between costs and charges for each scenario. This is most marked for Scenario 3, where the maximum charge is 35% higher than the maximum cost.

We found no single cause of the variation but have uncovered some interesting insights into how companies approach the developer services market, which may be contributing to variation of charges. We have grouped these insights into four themes: methodology for generating charges, delivery models, economies of scale, and overheads. These themes may in some instances mask the effects of each other and in other instances compound the effects of each other to create variation. For example, one company tenders for developer services alongside other activities, has lower SLP penetration, and has highly granular charges, all of which appear to lead to low charges. We identified a further two themes that were raised by several companies but that did not explain the significant variation in charges found in our quantitative analysis. These are regional labour costs and traffic management and council charges.

SLP market share has grown from 26% to 34% of total connections made since 2018/19. Eight of the 15 water companies have seen SLP market share in their areas grow year-on-year, including in areas where there were previously very low SLP activity and low charges. A further five companies reported SLP market share growth in 2019/20 followed by a decline in 2020/21, attributed by some to the impact of the COVID-19 pandemic. Our analysis indicates that the SLP market is influenced more by relationships between SLPs and incumbents, and SLPs and developers, the availability of sites in the region, and the geography of the region in relation to SLP bases, than by price.

### The four themes that appear to be contributing to variation in charges

- 1. Methodology for generating charges.** The methodology and balancing of principles that companies use to determine charges can have a material impact on charges and therefore levels of variation, depending on the scenario in question. Companies have adapted their charges and balanced the charging principles following consultation with customers. However, the variation in approach is contributing to variation in charges. For example, the level of granularity in charges led to one company over-recovering costs by 35% and another company under-recovering costs by 11% for the same scenario.
- 2. Delivery models.** There is significant variation in how companies approach developer services, including levels of outsourcing, the number of contractors used, and the length of contracts. We did not find any obvious correlation between these factors and cost. However, poor scrutiny of contractor rates may be hindering cost reflectivity of individual charges. This is most apparent for companies that procure developer services alongside other activities.
- 3. Economies of scale.** Economies of scale reduce costs for companies with large volumes of work and companies that procure materials through a large contractor or procurement hub, resulting in lower charges. Smaller companies and those operating across several disconnected regions do not have access to this.
- 4. Overheads.** There is significant variation in overhead and administrative costs, most pronounced for larger developments. This is in part due to the inconsistent definition of overheads, as well as different interpretations of the elements of costs that it is reasonable to recover.

### The two themes that appear to have little impact on variation of charges for the four scenarios we analysed

- 1. Regional labour costs.** Several companies told us that their location in the South East of England results in higher-than-average labour costs. Whilst there are certainly regional differences in labour rates, our analysis found that location did not explain the significant variation in costs.

- 2. Traffic management and council charges.** Several companies identified traffic management and council charges as a key driver of costs. In other scenarios with more onerous traffic management requirements, traffic management would certainly make up a higher proportion of costs, and the variation between companies would therefore be more significant. However, in this analysis large variation in costs exists despite minimal traffic management costs, so we do not consider it an explanatory factor of variation in this case.

## 5. Next steps

In this section, we set out some next steps that we think it would be helpful for the incumbent water companies in England to consider in relation to charges for new connection services, in the context of the current framework and Ofwat's future regulatory framework. The findings of this report must be considered in the wider context of the on-going analysis taking place at Ofwat. With the support of CEPA, Ofwat are currently assessing the various options to regulating developer services at PR24. A key consideration is how to effectively use markets and regulation to deliver better outcomes for customers. Feedback as part of that analysis has indicated that the significant complexity of the existing regulatory approach is the most material issue facing the developer services sector, with potential simplification of regulation and improved use of markets forming key considerations. Based on our findings, we have identified three steps that may follow this analysis. These are detailed below.

1. Ofwat has indicated that cost reflectivity will become an explicit principle as part of updates to the new connections charging rules. Increased clarity around what is expected of companies in relation to cost reflectivity would be valuable, including the right level at which to assure cost reflectivity (e.g. across new connections services or per individual activity). Companies may look to improve their ability to assure that charges for new connections services are cost reflective. In particular, companies that tender for new connection services alongside other activities such as repairs and maintenance need to consider how they can assure that their charges for new connections services reflect the actual costs incurred to deliver them.
2. As outlined above, our analysis found that SLP market share has increased in areas with previously concerning levels of SLP activity, and non-price factors appear to be more important. Further investigation may be considered to improve understanding of the drivers of SLP growth at a regional level, including engaging with SLPs and developers to understand their views. Companies should continue to increase engagement with SLPs and developers and continue to support the SLP market, particularly in areas where SLP activity remains lower than average.
3. We found that the significant variation of overheads present may in part be due to an inconsistent definition of overheads across the companies, as well as different interpretations of the elements of costs that it is reasonable to recover, with some companies not recovering reasonable costs such as central overheads. Further investigation may be considered to understand exactly what approach each company is taking to overhead allocation.

## Appendix 1 - Scenarios

### A. Single connection

Connection to an existing main of 90mm polyethylene (PE). Assume typical soil type for your region, stating this in your response. Assume that there is no rock and the land is not contaminated.

This includes service pipe and boundary box fitting, smart-meter installation, excavation and reinstatement.

25 – 32mm PE pipe

- Long connection – 8m (4m road surface and 4m unmade ground).

Assume that the road has 2 lanes. Traffic management involves no road closure, 2-way lights, and 4 parking bays for 4 days. Assume that the only payable council charges are for permitting.

Assume that the work is completed in a single phase with no requirement for additional visits.

### B. Small housing development

10 new service connections off new mains – 3m unmade ground. This includes service pipe and boundary box fitting, smart-meter installation, excavation and reinstatement.

New off-site connection to the existing main of 180mm polyethylene (PE). Assume typical soil type for your region, stating this in your response. Assume that there is no rock and the land is not contaminated.

New mains required – total length 50m, consisting of:

- 90mm PE – 10m road surface (including connection to existing 180mm PE main);
- 90mm PE – 20m unmade surface;
- 63mm PE – 20m unmade surface.

Assume that the road has 2 lanes. Traffic management involves no road closure, 2-way lights, and 4 parking bays for 4 days. Assume that the only payable council charges are for permitting.

Assume that the work is completed in a single phase with no requirement for additional visits.

### C. Medium housing development

50 new connections off new mains - 3m unmade ground. This includes service pipe and boundary box fitting, smart-meter installation, excavation and reinstatement.

New off-site connection to the existing main of 180mm polyethylene (PE). Assume typical soil type for your region, stating this in your response. Assume that there is no rock and the land is not contaminated.

New mains required – total length 300m, consisting of:

- 180mm PE – 10m road surface (including connection to existing 180mm PE main);
- 180mm PE – 90m unmade surface;
- 125mm PE – 100m unmade surface;
- 90mm PE – 100m unmade surface

Assume that the road has 2 lanes. Traffic management involves no road closure, 2-way lights, and 4 parking bays for 4 days. Assume that the only payable council charges are for permitting.

Assume that the work is completed in a single phase with no requirement for additional visits.

## D. Medium housing development with SLP involvement

Assume SLP performs all contestable elements of job, including design work.

50 new connections off new mains - 3m unmade ground. This includes service pipe and boundary box fitting, smart-meter installation, excavation and reinstatement.

New off-site connection to the existing main of 180mm polyethylene (PE). Assume typical soil type for your region, stating this in your response. Assume that there is no rock and the land is not contaminated.

New mains required – total length 300m, consisting of:

- 180mm PE – 10m road surface (including connection to existing 180mm PE main);
- 180mm PE – 90m unmade surface;
- 125mm PE – 100m unmade surface;
- 90mm PE – 100m unmade surface

Assume that the road has 2 lanes. Traffic management involves no road closure, 2-way lights, and 4 parking bays for 4 days. Assume that the only payable council charges are for permitting.

Assume that the work is completed in a single phase with no requirement for additional visits.

## Appendix 2 – Charges

The total charges that each company reported for each scenario are provided below:

Company	Total charges			
	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Affinity Water	£3,170	£19,544	£81,604	£6,554
Anglian Water	£1,509	£13,651	£47,660	£11,993
Bristol Water	£2,197	£19,525	£86,122	£5,331
Northumbrian Water	£1,840	£10,479	£51,015	£8,718
Portsmouth Water	£2,037	£17,997	£74,091	£2,405
Severn Trent	£2,924	£19,486	£51,335	£11,214
South East Water	£1,663	£16,072	£57,668	£6,553
Southern Water	£926	£14,301	£61,208	£3,794
South Staffs Water	£2,122	£15,603	£54,811	£9,159
South West Water	£2,093	£13,017	£39,216	£4,825
Sutton and Easy Surrey Water	£1,175	£16,497	£65,038	£8,881
Thames Water	£3,650	£29,420	£147,590	£5,450
United Utilities	£1,984	£20,352	£97,031	£14,680
Wessex Water	£2,770	£22,052	£95,268	£7,176
Yorkshire Water	£2,662	£19,711	£79,796	£483

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