ses WATER

APPENDIX SES104 SOFTENING COST ADJUSTMENT CLAIM

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APPENDIX SES104: SOFTENING COST ADJUSTMENT CLAIM

Our PR24 Business Plan included a cost adjustment claim (CAC) for the additional efficient costs resulting from our unique statutory obligation to soften the water we provide to over 80% of our customers.

While Ofwat has recognised the need, it has challenged the cost efficiency of the CAC by only partially accepting the proposed value of the claim.

On opex, Ofwat has challenged the price effects (e.g. chemicals and energy price increases) which were rejected on the basis that they are not unique to us and are dealt with elsewhere in Ofwat's cost modelling. We have provided additional justification in this representation and continue to seek £15.11 million of opex funding.

On capex, Ofwat has applied an optioneering and efficiency challenge to our requested costs on the basis that no external or internal benchmarking was provided to demonstrate that the proposed solution is best value for customers. We have provided additional justification in this representation in seeking the original request of £13.96 million of capex funding.

This appendix sets out our response to Ofwat's draft determinations and explains why our submitted softening CAC should be funded in full by Ofwat in its final determinations.

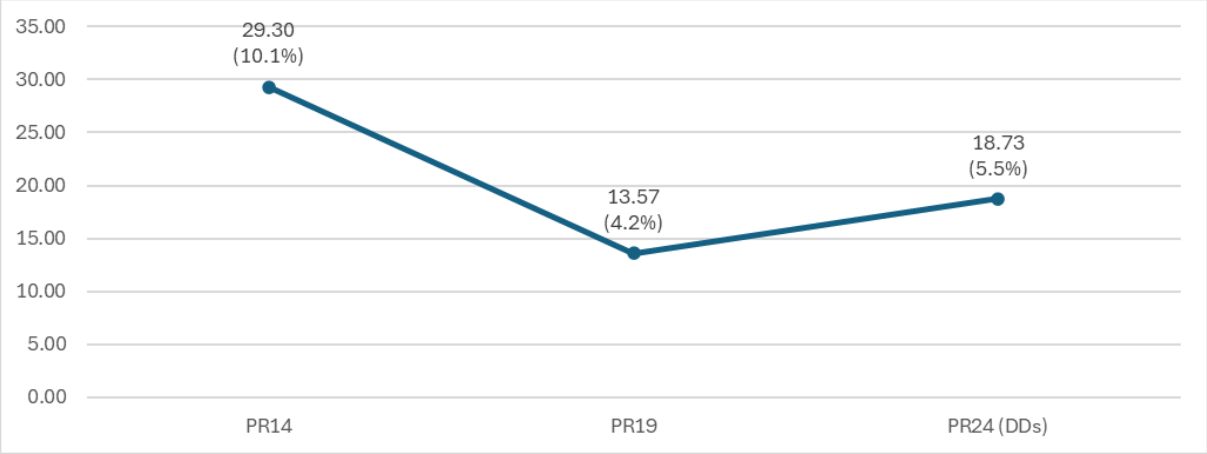
A. Executive Summary

Our unique circumstances

1. We have long-standing statutory obligations to partially soften the naturally hard groundwater in our supply area. These obligations date from 1862 (the Caterham Spring Water Company Act) and 1903 (Sutton District Waterworks Act as amended in 1983). This requirement extends to the five large groundwater water treatment works (WTWs) operated by the Company – Cheam, Elmer, Godstone, Kenley and Woodmansterne. In an average year these sites provide around 81% of the water supplied to our customers.
2. Over successive AMPs we have incurred additional operating costs and invested in, operated, and maintained additional treatment assets (and associated plant and equipment such as materials storage; handling and mixing equipment; control systems; and by-products management) at these five WTWs in order to meet our statutory obligations. Maintaining this activity requires material additional investment, in both operating expenditure (opex) and capital expenditure (capex), to reliably and efficiently soften the water treated at these sites.
3. For PR24, as per previous price reviews, we submitted a cost adjustment claim (CAC) to account for the additional efficient costs incurred as a result of our unique circumstances. Figure 1 below highlights the allowed adjustments from previous price reviews, as well as Ofwat's draft determination from PR24.

4. Figure 1 shows Ofwat's allowed adjustments for our softening CACs over time, including the materiality of these allowed adjustments, presented as the allowed CAC against the allowed total expenditure (totex). This difference in both the absolute value of the allowed adjustments, and the materiality of these adjustments, over time, helps to highlight the cycle of capital maintenance and investment in our WTWs and evolution in the input costs that we are required to incur.

Figure 1: Ofwat allowed adjustments (£m, 2022/23 prices) and materiality of allowed adjustments as a percentage of allowed totex[1]



Source: SES Water analysis

Customer benefits from softening

5. We estimate that the softening activities we carry out generates material cost savings of £46 per household per annum. We have carried out extensive analysis based on the reduced need for households to consume products like detergents and salts to deal with hard water, alongside a need to replace and maintain household appliances. For detailed breakdown of this analysis please refer to Annex A: Supporting material of our original CAC, Appendix SES029 Cost Adjustment Claim for Water Softening Cost.

Ofwat's PR24 Draft Determination

6. In its PR24 draft determination, Ofwat has partially accepted our CAC on softening, applying a totex adjustment value of £18.73 million, £10.35 million less than our claim of £29.08 million, as summarised in Table 1 below.

Table 1: Summary of Ofwat Draft Determination on CAC Softening[2,3]

£ million, 2022/23 prices before application of real price effects (RPEs) and ongoing efficiency (OE)	SES forecast	Ofwat DD allowance	Variance

[1] PR14, and PR19 allowed adjustments are from Ofwat's final determinations, before the application of RPEs and OE. PR24 allowed adjustment is from Ofwat's draft determinations, before the application of RPEs and OE.
[2] Note that as part of query from Ofwat following submission of our Business Plan (OFW-OBQ-SES-051), the capex request for Kenley was revised to be £10.89 million instead of £11.79 million. This is discussed further in the section on capex.
[3] Any discrepancies between the numbers quoted here and in the text are a product of rounding.

Opex	15.11	10.89	4.22
Capex – Kenley	11.79	7.84	6.12
Capex – Other	2.17		
Total	29.08	18.73	10.35

Source: Ofwat PR24 draft determination, SES Water analysis

7. Ofwat also proposes to introduce a price control deliverable (PCD) related to our softening costs, rather than the proposed bespoke performance commitment (PC), to return funding to consumers if investments are not delivered. Under the PCD, we will need to deliver our investment in softening equipment at Kenley WTW along with the other capex investment related to softening. Capex will be returned to consumers if we do not deliver the capital investment schemes set out in the CAC.
8. Opex will be returned based on a unit rate charged to each milligram of calcium per litre deviation above the 80ml/l target. The calculation of this unit rate mirrors the approach that we proposed in our PR24 Business Plan for a bespoke softening outcome delivery incentive (ODI). Ofwat's calculation of this unit rate assumes that the variable opex allowance for AMP8 is £7.46 million. We were not able to reconcile this number with the wider cost allowances set by Ofwat in its draft determination and submitted a query to Ofwat on that basis (OFW-IBQ-SES-005). Ofwat have since acknowledged that it made an error in the calculation of this allowance value by incorrectly applying RPEs and OE, and that this will be addressed as part of its final determination, which we welcome.

Ofwat's assessment of our cost adjustment claim

9. Ofwat accept that we face **unique circumstances** due to our statutory obligations to soften water, that there are no implicit allowances included in the base cost models attributable to these statutory obligations, and that there is a need to adjust allowances to account for these additional costs.
10. Ofwat also accepted that the claim exceeds the **materiality** threshold required and that the requirement to meet these statutory obligations are outside **management control**, while recognising that we have control over the solutions we deploy to deliver them.
11. Ofwat has, however, challenged the **cost efficiency** of both the opex and capex elements of the submitted claim.
12. For the opex element of our claim, Ofwat considers that we did not provide sufficient evidence to justify an increase in opex relative to AMP7 and has set the allowed adjustment equal to the AMP7 costs inflated from 2017/18 to 2022/23 prices (£10.89 million). Ofwat commented that most of the opex cost increases from AMP7 are due to price changes, which it does not consider are unique to us. Its CAC assessment stated that increases in labour costs and 'other opex' also required further explanation.
13. Ofwat also does not consider that sufficient evidence has been provided on the capex element of our claim, including whether alternative options instead of the replacement of filters at Kenley WTW were considered. Ofwat also considers that the replacement of water filters is a common activity that other water companies have previously delivered, and that we should be able to benchmark ourselves against these costs. In response, Ofwat has applied a 20% optioneering challenge and a 20% cost efficiency challenge, leading to a total capex cost adjustment of £7.84 million. We were not able to reconcile these adjustments with our submitted, forecast capex of £13.96 million (£11.79 million for capex at Kenley, and £2.17 million for other capex), and sought clarification from Ofwat. Ofwat responded to our query (OFW-IBQ-SES-003) noting a reduction in the forecast

capex for Kenley post Business Plan submission, from £11.79 million to £10.89 million. We respond to this in the subsequent section on capex.

Our response to Ofwat's PR24 Draft Determination

14. We consider that in its draft determination of our PR24 plan, Ofwat has taken an inconsistent approach in the assessment of the opex elements of our softening CAC, in comparison to the approach taken to the assessment of base modelled costs. This results in several errors in the draft determination that need to be remedied ahead of final determination.
15. The impact of these errors on us is a significant underestimation of the cost adjustment required to account for the additional costs that we incur in meeting our statutory obligations to soften the water we provide to our customers (35.6% of our CAC has not been allowed).
16. The errors in Ofwat's draft determination on opex primarily result from the approach that Ofwat takes to capturing softening costs in its totex allowances for us and the inconsistencies in this approach in contrast to our original CAC.
17. As our softening obligations are unique to us, softening related opex is assessed separately from Ofwat's base cost econometric modelling via the CAC. This means that the full efficient costs of softening, prior to the application of RPEs and OE from the 2022/23 base year cost, need to be fully reflected in Ofwat's separate assessment, *including* the impact of price effects up to the base year.
18. In Ofwat's base cost modelling, implicit allowances may be provided for certain activities and price effects by virtue of the way the models are specified i.e. by the inclusion of appropriate explanatory variables or cost drivers. Ofwat has also provided additional explicit allowances through post-modelling adjustments, such as the energy cost adjustment, to base modelled costs to ensure that these modelled costs reflect an appropriate price level for the 2022/23 base year in the modelling.
19. But because our softening costs are not included within Ofwat's base cost econometric modelling – they are separately assessed as part of the softening CAC – they are not subject to these same implicit or explicit adjustments. It is therefore incorrect for Ofwat to assume that both volume and price effects that may be implicitly or explicitly captured within its base cost modelling can be assumed to also be accounted for in its separate cost assessment of efficient softening opex incurred by us.
20. Chemical, energy and labour price effect pressures in the current AMP may not – and indeed are not – unique to us. However, we are unique in that Ofwat treats our softening costs differently by separately assessing these costs, while other companies softening costs, which are not subject to statutory obligations, are included in the base cost modelling where Ofwat applies price adjustments. Ofwat must recognise and account for theses softening related price effects within its separate cost assessment, to ensure it appropriately reflects the efficient base year (2022/23) level of required opex in its allowed adjustment.
21. In only applying a CPIH inflationary adjustment to the AMP7 allowed cost adjustment for softening, Ofwat has ignored clear evidence of above inflation price increases to material components of our softening opex including chemicals, electricity and labour costs during the period of the current AMP. A CPIH inflation basket of goods and services does not act as a like-for-like match for the activities that we undertake as part of our unique

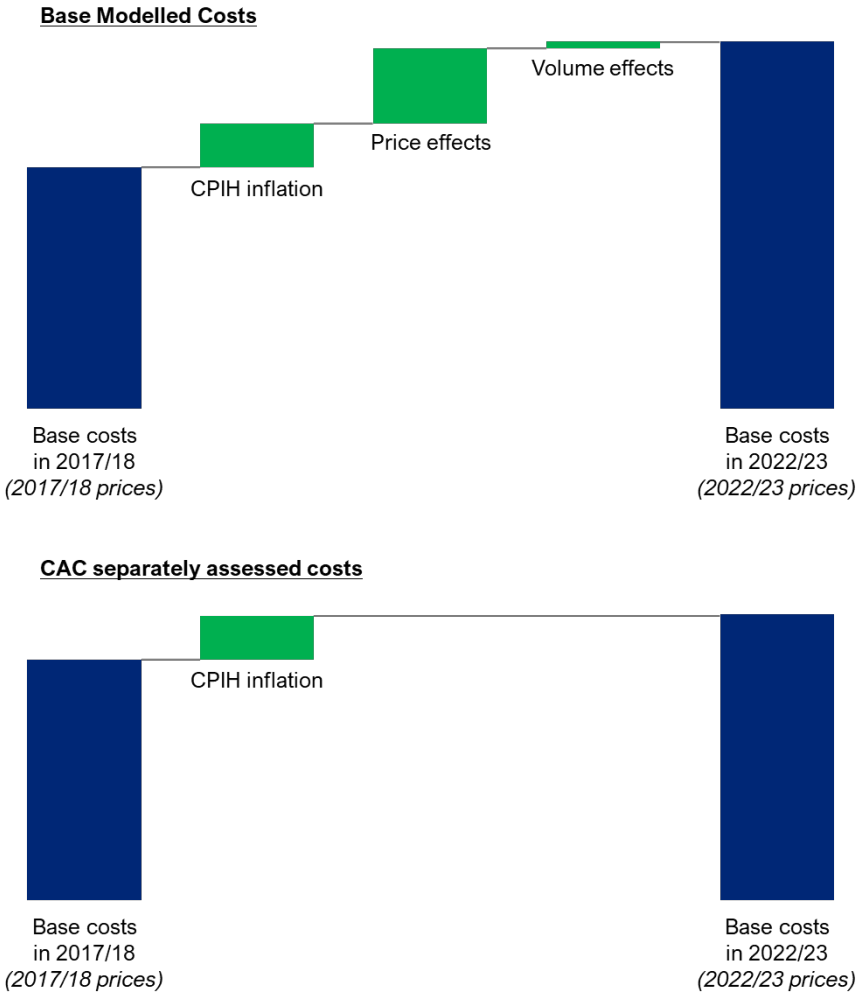
circumstances and requirements around softening given that chemicals, energy and labour are such a material component of our softening opex base.[4]

22. We have illustrated in Figure 2 below why Ofwat's approach in its draft determination does not give rise to an appropriate allowance for our softening opex. In effect, Ofwat has treated softening costs differently to the approach it has taken for the base econometric modelled costs to account for price effects in the current AMP.[5]

23. As we show in later sections of this appendix, the various price effects that we assumed in our original CAC submission continue to appear reasonable, and in some cases conservative, compared to the real price effects that can be observed from published energy, chemicals and labour price indices, and the expected mix of these input costs to our separately assessed softening opex base.

24. As a result, we conclude that Ofwat need to allow these price effects in full as part of its final determination on our CAC.

Figure 2: Illustrative example of inconsistency across Ofwat's treatment of base modelled costs and CAC separately assessed costs



[4] For example, in contrast to the costs included in Ofwat's base econometric models, chemicals are c. 40% of softening opex.
[5] Ofwat on the one hand concludes that energy costs require adjustments to account for price effects in the recent period in base econometric modelled costs, but on the other hand concludes that an inflationary increase alone captures all the price changes in costs between 2017/18 and 2022/23 for the separately assessed softening costs.

Source: SES Water analysis

25. In response to Ofwat's draft determination, we have also provided supplementary information relating to our labour and maintenance costs, as well as other opex costs categories. This includes a detailed breakdown of these costs and explanation of the cost drivers, that supports our view that these costs should be allowed in full as part of Ofwat's final determination.
26. Finally, we rebut Ofwat's application of arbitrary optioneering and cost efficiency challenges to our forecast capex costs, far in excess of the efficiency challenges associated with its base cost modelling. For Kenley WTW, which represents the most significant component of our softening capex for AMP8, we have provided supporting information related to the comprehensive optioneering and cost assessment exercises that we undertook in preparation of our original CAC.
27. For our other capex costs forecasts, we think Ofwat has chosen an inappropriate approach in its draft determination, in applying these arbitrary adjustments given in part because of the binary nature of these works. Overall, we consider that our option-by-option appraisal and evidence of the wider benchmarking that we have carried out provides sufficient confidence that our forecast £13.96 million in capex for softening is both robust and efficient and should be allowed in full as part of Ofwat's final determination.

B. Opex

28. As part of our CAC, we proposed opex costs of £15.11 million (before RPEs and OE), a breakdown of which, against the relevant inputs, is provided in Table 2 below.

Table 2: Breakdown of actual and forecast opex costs in AMP7 and AMP8

Opex costs (£ million)	AMP7 (2017/18 prices)	AMP7 (2022/23 prices)	AMP8 (2022/23 prices) (before application of RPEs + OE	AMP8 (2022/23 prices) (after application of RPEs + OE
Chemicals	3.86	4.56	5.98	5.80
Electricity	2.92	3.45	3.64	5.87
Labour	1.20	1.42	2.47	2.40
Plant Maintenance (including Labour)	0.61	0.72	1.70	1.64
Waste Disposal	0.30	0.35	0.35	0.34
Other	0.33	0.39	0.98	0.95
Total	9.22	10.89	15.11	17.00

Source: SES Water analysis

29. The basis of our CAC for opex associated with softening is the actual costs that we have incurred in the most recent year of actual data (2022/23), and is driven by input costs that can be considered as fixed or variable in the short term:
    - Fixed costs: Labour, Plant Maintenance (including Labour) and Other costs.
    - Variable costs: Chemicals, Electricity and Waste Disposal.
30. We carried out a detailed bottom-up assessment for each input, projecting the 2022/23 actual costs over time against likely reduction in customer demand (and associated reduction based on activities to reduce leakage and per capita consumption). We then applied the impact of real price effects (RPEs), where appropriate, and an ongoing efficiency (OE) challenge.
31. Ofwat have challenged some of our narrative by pointing out that:
    - increases in chemical and electricity prices since AMP7 impact all companies and are not unique to us;
    - increases in labour and maintenance costs have not been fully justified; and
    - increases in other opex costs have not been fully explained.
32. In the following sub-sections, we address each of these challenges from Ofwat and provide further information to support our claim for an adjustment to our allowance.
33. Overall, we are requesting that Ofwat allow our original CAC in full at final determination including the price effects and increases in costs since PR19 that Ofwat has queried in its assessment.

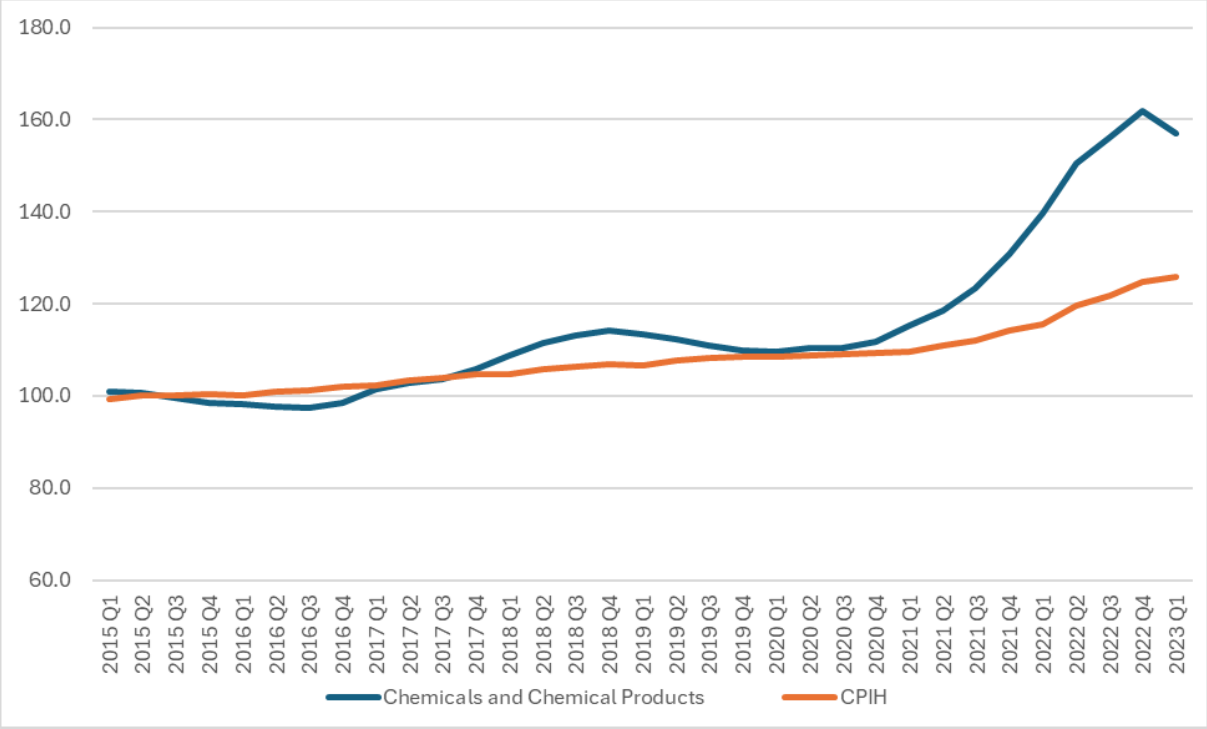
Price effects - Chemical

34. Ofwat has accepted our unique circumstances, and the need to adjust our wholesale totex allowances to account for the material additional costs associated with softening, given that there is no implicit allowance included in the base cost models attributable to our statutory obligations to soften.

35. The largest element of opex for softening is chemical costs, which represent 39.6% of total softening opex in our CAC for AMP8, before application of RPEs and OE. In comparison, chemical costs represent less than 5% share of other companies' costs in AMP8.[6] As stated in our original CAC, the global price of these chemicals has increased materially since the start of AMP7. Input price increases for chemical costs sit outside of our direct control and have been driven by a number of geo-political and macro-economic impacts – including European and global supply and demand, energy prices (chemical production is an energy-intensive industry), and the effects of the COVID pandemic (producers cut back on production and global chemical supplies shrank) – all of which were outside of our management control.

36. In Ofwat's draft determination it comments that the ONS's chemicals price index does not significantly deviate from CPIH long term average. We do not agree with Ofwat's claim, as we have observed significant, above inflation increases in the price of chemicals, as illustrated in Figure 3 below, which shows the ONS chemical and chemical products producer prices index against CPIH inflation.

Figure 3: ONS's chemical and chemical products producer prices index and CPIH inflation, 2015 = 100



Source: ONS: chemical and chemical products PPI (G6VG) and CPIH index (L522)

37. The ONS data shows that within this period, chemical prices increased by up to 60% relative to 2017. In our experience there has been considerable variation within the

[6] Ofwat PR24 Draft Determination: Expenditure Allowances, Real price effects, page 142.

chemicals cost category, with some prices increasing significantly faster than the indexed costs. For example, the ONS data suggests an increase in chemical prices between 2020/21 and 2022/23 of 24.67%, while we have observed actual price increases significantly greater than this over the same period, as set out in Table 3 below.

Table 3: Changes in observed chemical prices from 2020/21 to 2022/23[7,8]

Chemical	Unit cost price increase	Unit cost price increase (%)
Hydrochloric acid	£75/tonne	79%
Lime	£135/tonne	129%
Caustic soda	£770/tonne	326%
Silver sand	£20/tonne	22%
Ferric acid	£60/tonne	36%

Source: SES Water analysis

38. Over the 2017/18 to 2022/23 period actual CPIH inflation has increased at a much slower rate than the indexed chemical costs, as illustrated in Figure 3 above. The year-on-year annual CPIH inflation figures, presented in Table 4 below, further highlight this.

Table 4: Actual CPIH Inflation 2017 to 2023

Year	Actual CPIH inflation
2017	2.6%
2018	2.3%
2019	1.7%
2020	1.0%
2021	2.5%
2022	7.9%
2023	6.8%

Source: ONS: CPIH annual rate (L55O)

39. Even with relatively high CPIH inflation in 2022, the ONS's chemical and chemical products producer prices index highlights significantly larger increases in prices (10.41% in 2021, and 24.67% in 2022).

40. These actual increases in chemical costs observed over AMP7 have not been adequately captured in Ofwat's draft determination for softening. Instead, Ofwat have taken the total AMP7 allowed adjustment from 2017/18 and inflated it to 2022/23 prices to derive the size of the proposed adjustment for its totex allowance for AMP8. This has the effect of underestimating the size of the adjustment required for chemical costs associated with softening for AMP8, for two key reasons which arise from Ofwat's separate assessment of our softening costs:

[7] Price increases shown here are in nominal terms.
[8] Hydrochloric acid and lime comprise over 90% of the chemicals that we use in our softening process.

- There is **no implicit allowance** for our chemical costs associated with softening for AMP8 because these costs are excluded from Ofwat's base cost models and subject to separate assessment. In contrast, other water companies do have an implicit allowance for chemicals as their softening costs (of which chemical costs are a key component) are considered as part of base modelled costs, and the actual outturn costs used in Ofwat's base models will include these observed increases in chemical prices.
- There is **no explicit allowance** adjustment for chemical costs associated with softening during AMP7, as no explicit chemical costs adjustment has been applied to the ex-ante AMP7 allowances to account for the change in the price level in the 2022/23 base years. The AMP7 allowances therefore do not capture any price effects during AMP7.

41. As a result, the real increase in prices for chemicals during AMP7 that would be expected to be reflected in the 2022/23 base year softening costs is not captured or allowed for in Ofwat's separate cost assessment of our CAC.

42. To remedy this, Ofwat need to account for above inflation price increases in chemical costs between 2017/18 and 2022/23 in determining the size of the allowance adjustment for the chemical costs element of opex associated with softening.

43. Relying only on the ONS data would suggest a 29.1% increase to the £4.56 million AMP7 (2022/23 prices) chemical costs presented in Table 2.[9] This would result in an allowed adjustment of £5.89 million for the chemical costs element of opex associated with softening for AMP8. This is broadly consistent with our original CAC proposal of £5.98 million.

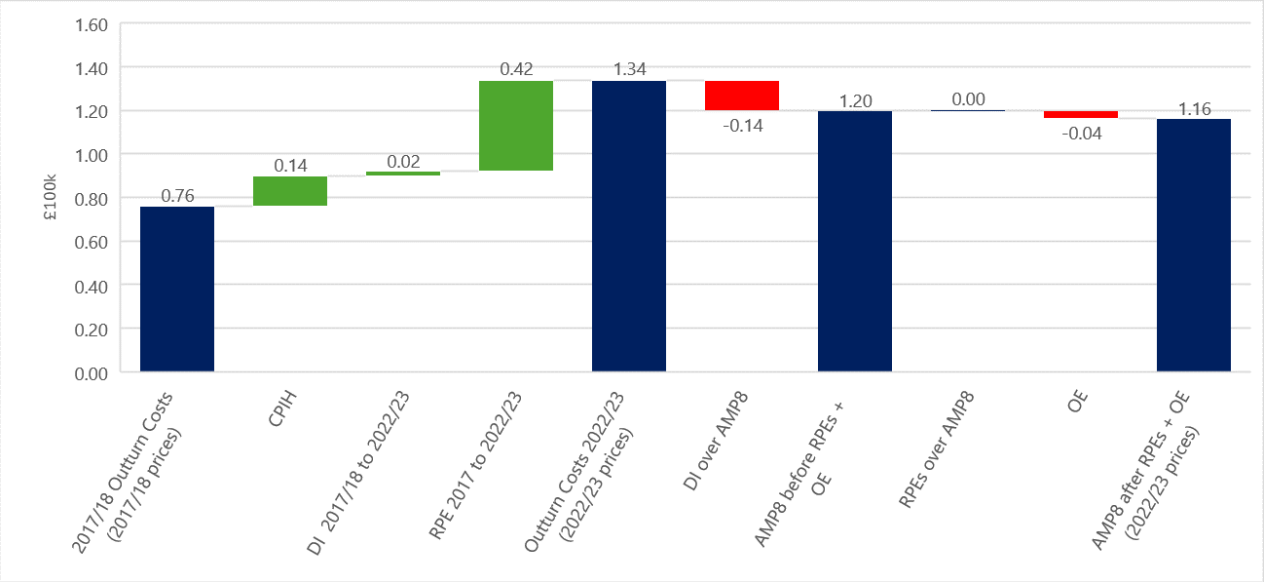
44. However, as discussed by Ofwat in its draft determination, the ONS chemicals and chemical products index covers a wide range of chemicals which may not fully reflect the chemical costs water companies face.[10] As discussed at paragraph 36 above, we have observed increases to chemical prices in excess of that explained by the index. Faced with these escalating costs, the basis of our forecast for AMP8 was the actual outturn chemical costs in 2022/23, £1.34 million per annum (2022/23 prices).

45. In response to Ofwat's draft determination, we have reviewed our actual outturn costs for chemicals in 2017/18, which were £0.76 million per annum (2017/18 prices). If we were to inflate these costs to 2022/23 prices, and account for changes in customer demand and throughput (distribution input (DI)), which captures changes in the volumes of chemicals we use (the **volume effects**), we would still be left with an allowance 'gap' compared to the 2022/23 actual costs that we have observed.

46. We believe that this gap can be attributed to **price effects** i.e. the increase in prices for chemicals observed since 2017/18. We have calculated this gap at £0.42 million per annum (or 46.7% of the inflated 2017/18 outturn costs) and provided a simplified illustration of this evolution of our forecast annual chemical costs for AMP8 in Figure 4 below.

[9] Based on cumulative CPIH change from 2017 to 2022 of 18% and cumulative PPI chemicals change from 2017 to 2022 of 47.1%.
[10] Ofwat PR24 Draft Determinations: Expenditure Allowances, Real price effects, page 142.

Figure 4: Illustrative evolution of annual chemical costs from 2017/18[11,12]



Source: SES Water analysis

47. In summary:

- Chemical price effect pressures throughout AMP7 are not unique to us. However, Ofwat accept that softening costs, and thus the associated price effects, are unique to us. These price effects were included in our original claim and accounted for in the 2022/23 base year costs that we used to forecast our total costs for AMP8.
- In Ofwat's draft determination it has failed to account for these price effects in its allowed cost adjustment, which is inconsistent with the approach that it has taken elsewhere in its cost assessment, for example, in the approach taken to apply an adjustment to base modelled costs for changes in energy costs throughout AMP7.
- Chemical prices (which are the most material component of our opex associated with softening, accounting for 39.6% of our total forecasted opex) have increased significantly over the period 2017/18 to 2022/23. Given that there are no implicit or explicit adjustments to account for the above inflation increases in chemical prices during AMP7, the effect of Ofwat's draft determination is to underestimate the size of the allowed cost adjustment required.
- To remedy this, Ofwat need to treat these costs in the same way that they proposed to treat base modelled costs, i.e. ensure that price effects are accounted for in the base year cost to roll forward into AMP8.
- Our top-down analysis, using the ONS index data, indicates an uplift of the allowed cost adjustment from Ofwat's draft determination of 29.1%, to account for the above inflation increases in chemical prices. Our own bottom-up analysis suggests that the adjustment should be closer to 46.7%.
- For the reasons set out above, we recommend Ofwat allow the chemical costs component of our opex CAC (£5.98 million, before RPEs and OE) in full in its final

[11] Note that this evolution of costs is for illustrative purposes, with slight deviation from the numbers in our CAC.
[12] Despite recent global price pressures and escalation in chemical costs, we are assuming the price of chemicals in 2022/23 will remain constant in real terms and not deviate significantly from CPIH going forward. This can be observed from our original CAC which did not include a forward-looking RPE adjustment for above inflation increases in chemical prices.

determinations (an increase of £1.42 million, before RPEs and OE, from its draft determinations).

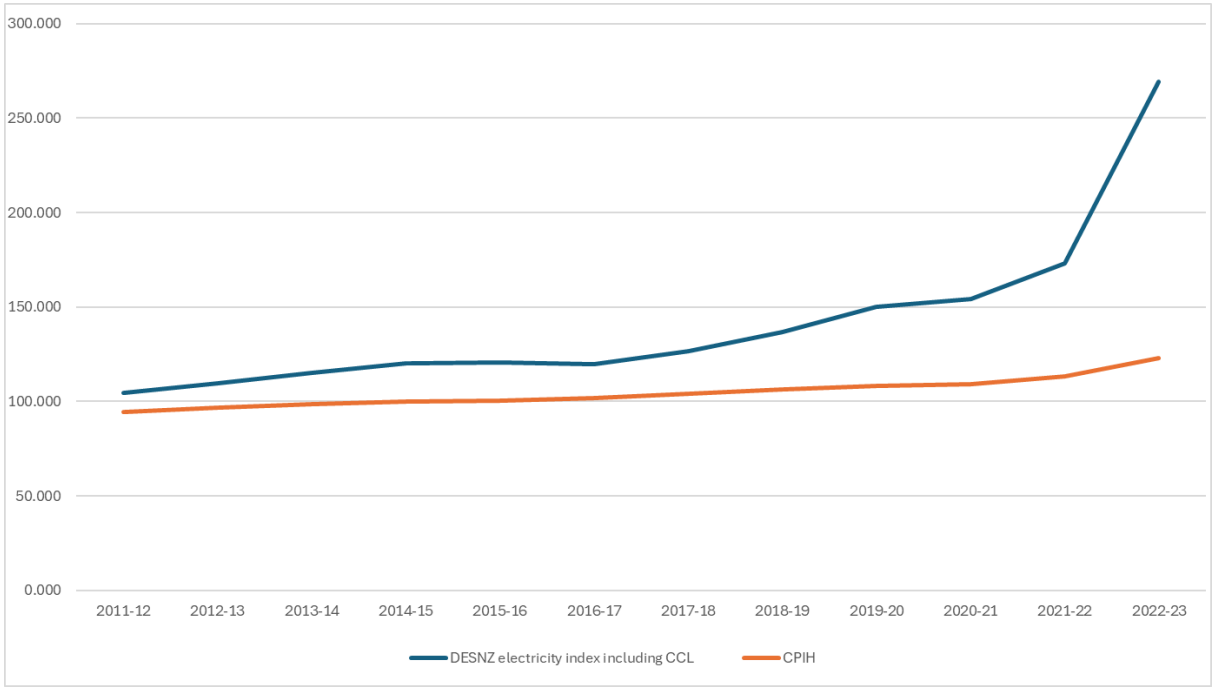
Price effects – Electricity

48. Electricity costs, i.e. the cost of electricity purchased for use on site and consumed by key assets used in the softening process, represent the second largest element of our opex associated with our softening obligations (24.1% of total opex before application of RPEs and OE). Note that the electricity costs associated with our softening CAC are more material than the electricity cost component of modelled base costs (12.5% for the sector, 14.5% for us).

49. To forecast our energy costs for softening for AMP8, we carried out a bottom-up analysis, that considers only assets with high load factors (daily utilisation) and calculated their power usage and cost using our average 2022/23 outturn electricity price of £0.1080 / kWh. This is a conservative approach as other assets associated with washwater filtration and sludge handling were not included in our calculation of our forecast energy costs for softening. In addition, our outturn electricity price in 2022/23, which forms the basis of our softening electricity costs forecast for AMP8, is lower than the actual wholesale electricity price observed in 2022/23 and is a function of our successful hedging strategy, the benefit of which ends in April 2025

50. As has been well documented, there have been significant increases in electricity prices over the last few years, driven by geo-political and macro-economic impacts – a product of covid and the war in Ukraine. Figure 5 below shows the Department for Energy Security and Net Zero's (DESNZ) electricity index growth versus CPIH from 2011/12 to 2022/23.

Figure 5: DESNZ electricity index and CPIH inflation



Source: Ofwat, PR24 DD Energy cost adjustment model

51. Table 5 below shows Ofwat's own analysis of the DESNZ electricity index growth rate net of CPIH.

Table 5: DESNZ electricity index growth rate net of CPIH

Year	DESNZ electricity index growth rate net of CPIH
2012/13	2.3%
2013/14	3.0%
2014/15	3.0%
2015/16	-0.1%
2016/17	-2.1%
2017/18	3.2%
2018/19	5.6%
2019/20	8.2%
2020/21	1.7%
2021/22	8.3%
2022/23	43.2%

Source: Ofwat analysis, PR24-DD-Energy-cost-adjustment model

52. This analysis shows that from 2017/18 to 2022/23 electricity prices have increased by 70.2% over and above CPIH inflation. Similar to our chemical costs, these actual increases in electricity costs observed over AMP7 have not been captured in Ofwat's draft determination on softening.

53. Electricity price effect pressures in the current AMP are not unique to us. However, as noted at paragraph 20, we are unique in that Ofwat treats our softening costs (of which electricity costs are a significant component) differently by separately assessing these costs, while other companies softening costs are included in the base cost modelling where price adjustments are implicitly or explicitly applied through the cost models. In Ofwat's draft determination, an uplift factor of 1.641 (or 64.1%) has been applied to modelled base costs to account for the increases in electricity prices between 2012/13 and 2022/23.

54. However, in Ofwat's draft determination on our softening CAC, it has simply taken our total AMP7 costs from 2017/18 and inflated them to 2022/23 prices to derive the size of the overall adjustment. This has the effect of materially underestimating the size of the allowance adjustment required for electricity costs associated with softening for AMP8.

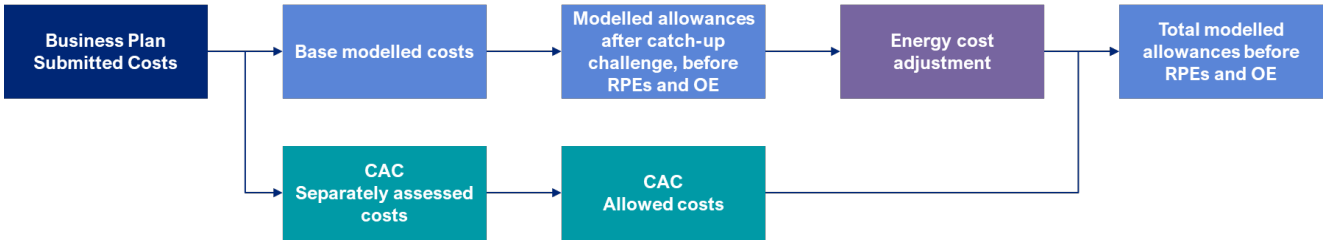
55. Moreover, as discussed above, Ofwat's approach is inconsistent with its overall approach to managing uncertainty around energy costs in AMP7 and AMP8, which includes an explicit sector wide energy cost adjustment to base modelled costs, as illustrated in Figure 6 below, and an accompanying end-of-period true-up mechanism. In its draft determinations, in response to our CAC, Ofwat claim that it has dealt with energy price uncertainty through its proposed energy cost end-of-period reconciliation. Ofwat also states that it "will make ex-post true up adjustments based on differences between outturn prices and the CEPA forecasts".[13] This implicitly assumes that the corresponding ex-ante allowance for energy is based on CEPA's forecast of energy prices.

56. However, Ofwat's approach to calculating the allowed adjustment based on our CAC fails to incorporate CEPA's forecasts, by only inflating our ex-ante AMP7 allowances by CPIH.

[13] Ofwat PR24 Draft Determinations: Expenditure allowances, Real price effects, page 141.

57. Ofwat has failed to recognise this in its draft determination, and the impact of this is that the energy true-up adjustment will still likely underfund our energy costs for softening. We are uniquely impacted by this, and this will not be an issue for the energy costs of other companies, as Ofwat has applied such an adjustment for these companies' base modelled costs (incl. the costs they incur for softening water which are included in Ofwat's base models).

Figure 6: Simplified illustration of Ofwat's cost modelling at draft determinations[14]



Source: SES Water analysis of Ofwat PR24 Draft Determination

58. The energy cost adjustment that Ofwat have applied to base modelled costs as part of its draft determination incorporates an 'uplift factor' to adjust base modelled costs to reflect market prices in 2022/23. By not applying this same adjustment to the separately costs associated with our CAC, Ofwat have not adequately reflected the expected price level for electricity costs in its separate cost assessment of our softening costs. Note that we provide separation representations on Ofwat's proposed energy cost adjustment in Appendix SES105.

59. To remedy this, Ofwat need to take a consistent approach across the treatment of electricity costs in the base models and separately assessed costs, and account for above inflation price increases in electricity costs between 2017/18 and 2022/23 in determining the size of the allowance adjustment for the electricity costs element of opex associated with softening.

60. Our hedging strategy has meant that we have been able to reduce the impact of some of the recent increases in electricity prices during AMP7, reducing our costs for customers. As noted in the 'Review of Ofwat's Assessment of SES Water's Power Costs Claim' that we have submitted alongside this representation, while we have high energy consumption, partly explained by our obligations to soften, incurring high energy costs, we have relatively low unit costs of electricity. In terms of our CAC for softening, this means that the difference between our forecast costs, which are a function of our actual 2022/23 outturn costs, and Ofwat's proposed cost adjustment at draft determination's is smaller than that suggested by the top-down analysis discussed above i.e. the difference between our forecast electricity costs for softening £3.64 million, 5.5% higher than Ofwat's allowed costs of £3.45 million.

61. In summary,

- Electricity price effect pressures are not unique to us. All water companies have been impacted by significant, above inflation, increases in electricity prices. In Ofwat's draft determinations, through its proposed energy cost adjustment, it provided an explicit uplift adjustment to base modelled costs to capture these price effects up to the 2022/23 base year.
- Electricity costs are a material component of our opex for softening, and part of our original separately assessed CAC. However, Ofwat has failed to treat consistently

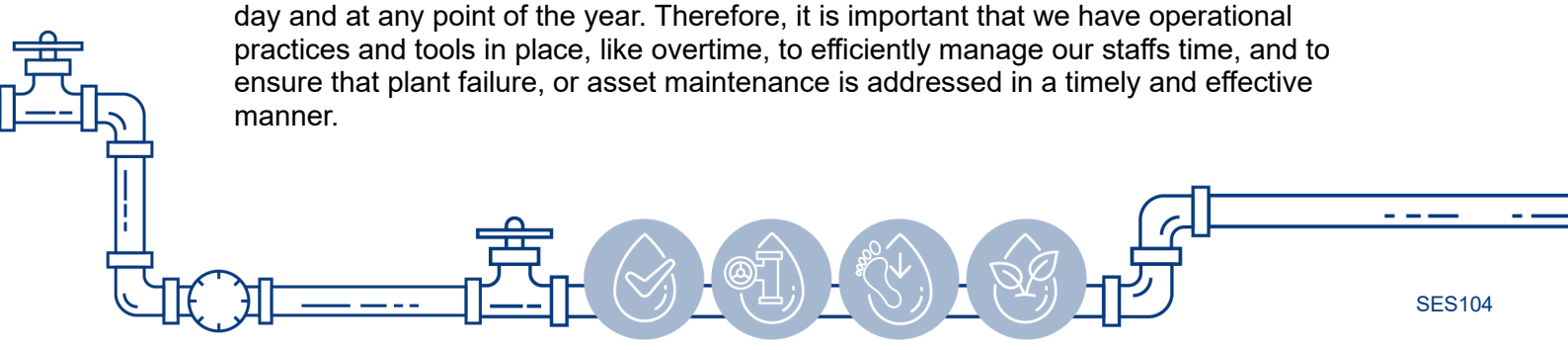
[14] Note that this is a simplified illustration of Ofwat's cost modelling at draft determinations. There are other adjustments applied to modelled allowances after catch-up challenge, before RPEs and OE, such as the net zero adjustment, or the meter replacement adjustment.

electricity costs as, differently from base costs, it has not allowed for price effects for electricity in its allowed cost adjustment in its draft determination.

- Therefore, Ofwat need to treat the electricity costs associated with our opex for softening in the same way that it has proposed to treat base modelled costs, i.e. to ensure that price effects are accounted for in the base year cost to roll forward into AMP8.
- Our top-down analysis, using DESNZ electricity price growth data, shows price increases of around 70.2% since AMP7. While Ofwat's own analysis implies an uplift adjustment of 64.1% to ensure base modelled costs reflect recent increases in electricity prices.
- Our own bottom-up analysis suggests an increase of £0.19 million, or 5.5% to Ofwat's draft determination for the electricity costs component of our opex, in order to fully allow our claim. This relatively small adjustment is a result of conservative assumptions and forecasts of electricity usage for softening, as set out in our original CAC, and a successful hedging strategy that has helped manage price increases in our latest actual outturn electricity costs.
- For the reasons set out above, we recommend Ofwat allow the electricity costs component of our opex CAC (£3.64 million, before RPEs and OE) in full in its final determination (an increase of £0.19 million, before RPEs and OE, from its draft determination).

Labour and maintenance

62. To deliver our statutory requirements to soften we require increased costs associated with levels of manpower, materials, interventions and maintenance. Our approach to forecasting these costs as part of our original CAC, included a bottom-up analysis of the specific operational requirements across the five WTW sites. In our Business Plan, we produced forecasts for:
    - Labour costs;
        - Base costs, which includes four operational staff and three technicians (one system, one mechanical and one electrical technician) across the five sites;
        - Management costs, which include one manager across the five sites;
        - Back office (payroll) costs; and
        - Overtime costs for operational staff.
    - Plant maintenance costs, which have been calculated using actual data on plant breakdown rates, maintenance activity and frequency of asset replacement. Based on this data, we have been able to assess that around 50% of all plant maintenance costs incurred are related to our softening activities.
63. Overtime costs were not accounted for within our previous softening claim for AMP7, due to an accounting error, and as a result we have been historically under-reporting the labour component of our softening costs. These are however material costs that we incur in delivering against our statutory obligations to soften, and our target of 80 mg/l of calcium in treated water across our five sites. Plant failures can occur at any time of the day and at any point of the year. Therefore, it is important that we have operational practices and tools in place, like overtime, to efficiently manage our staffs time, and to ensure that plant failure, or asset maintenance is addressed in a timely and effective manner.



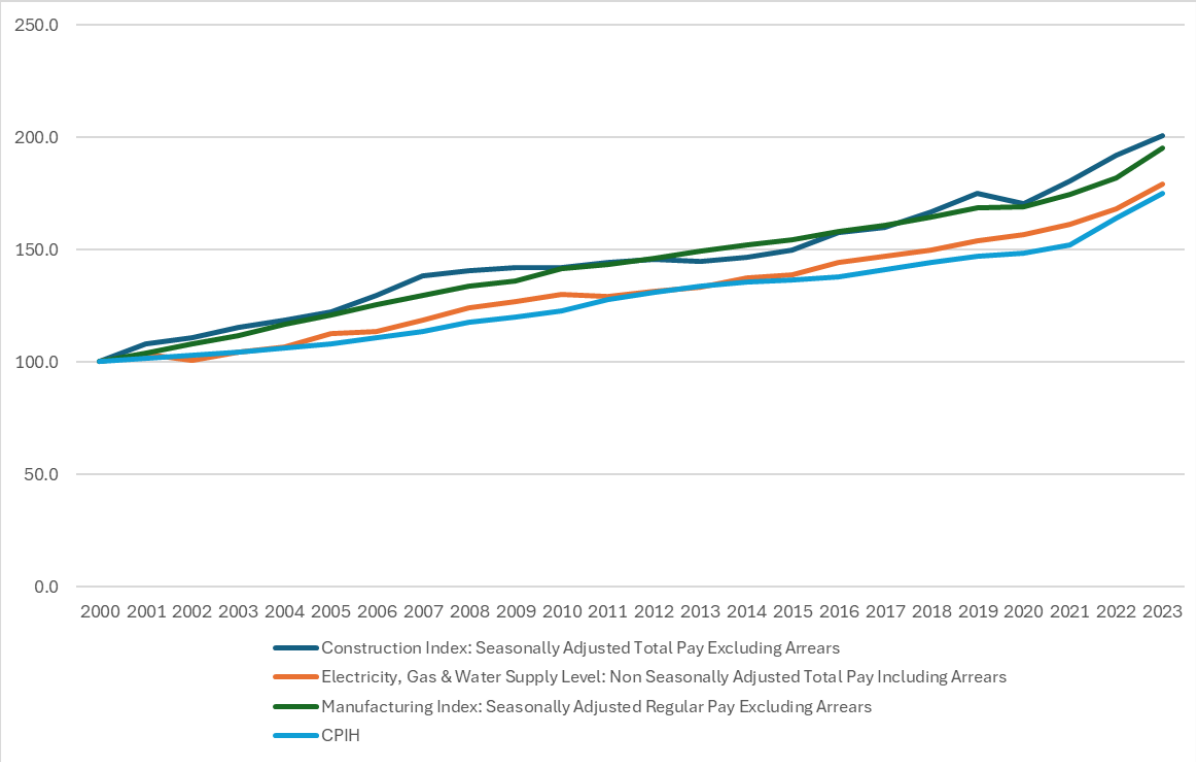
64. For each softening site, a multi-disciplined team comprising process operators, and three types of technicians (mechanical, electrical and systems) operate and maintain each site in a safe, reliable and efficient manner within a strict set of quality and legislative parameters. Collectively, these teams undertake a wide range of tasks on a regular basis including process monitoring and optimisation, sampling, routine operational tasks requiring manual intervention, planned, defect and emergency maintenance and supervision of chemical deliveries.

65. These tasks, which are applicable to all of our WTWs, are made more complex as a result of the requirement to soften by virtue of the fact that the additional process stages add complexity to the operation of the site. This includes the requirement for multiple additional chemicals for the overall treatment process, the additional process controls using batch or semi-batch chemical reactions, and the provision of multiple waste or by-product streams. The softening process also requires more complex asset configurations – and far larger ones than would be required for a non-softening site of equivalent capacity – which requires higher volumes of planned and reactive maintenance to take place.

66. Together, the addition of these tasks also requires a greater level of supervision, provided in the form of works managers, for the softening sites. We have assessed a proportion (50%) of these labour costs to be attributable to softening and have prepared our forecast labour and maintenance costs for softening for AMP8 on this basis.

67. Ofwat recognised for AMP7, and recognises again for AMP8, that labour prices are largely outside of company control given companies operate in competitive labour markets, and the difference between CPIH and wage growth can be significant. See Figure 7 below which presents the ONS's construction, manufacturing, and electricity, gas and water supply average weekly earnings indices, against CPIH inflation.

Figure 7: ONS's average weekly earnings indices and CPIH inflation, 2000 = 100



Source: ONS: AWE Construction index (K553), AWE Electricity, Gas & Water Supply Level index (K57Y), Manufacturing index (K54R), and CPIH index (L522)

68. In addressing this, Ofwat use labour RPEs, using the OBR's earnings forecasts and apply an ex-post true-up adjustment between forecast and outturn wage growth using the ONS Annual Survey of Hours and Earnings (ASHE) manufacturing wage index for wholesale labour costs and using the ASHE construction wage index for enhancement labour costs. Ofwat consider that these indices most directly reflect the labour market cost pressures that water companies face.

69. These price effects were included in our original claim and accounted for in the 2022/23 base year costs for labour and maintenance that we used to forecast our total costs for AMP8.

70. While Ofwat accept the price effect pressures associated with labour and have introduced measures to account for them throughout AMP8, it has failed to account for them in its assessment of our CAC. In the same way that Ofwat has underestimated the cost adjustments required for our chemical and electricity costs, it has underestimated the labour and maintenance costs element of our opex, by simply inflating the total AMP7 allowed costs from 2017/18 to 2022/23 to derive the size of the overall adjustment.

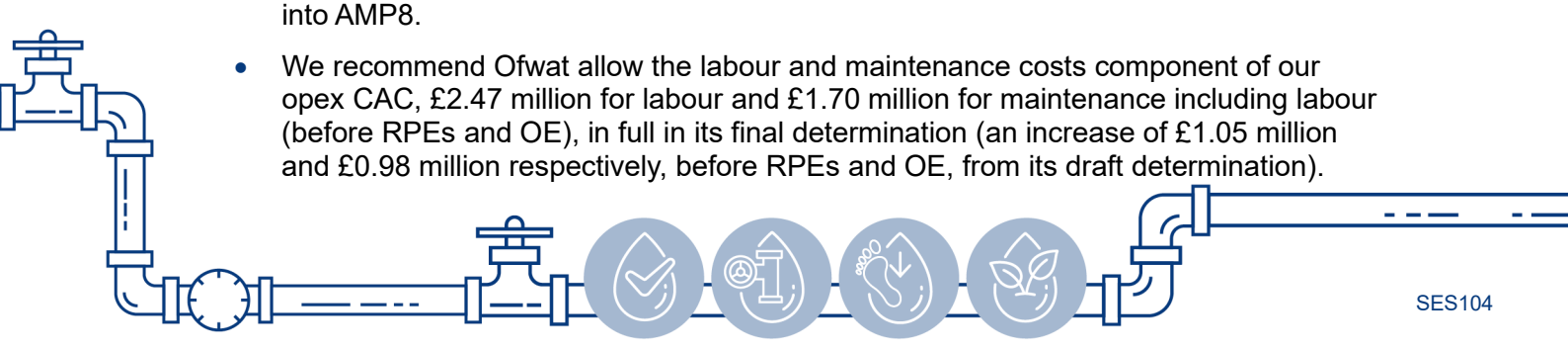
71. This approach does not capture the above inflation increase in labour costs that have occurred over the AMP7 period and is inconsistent with Ofwat's general approach to managing the known uncertainty around labour costs and its approach to base modelled costs. Other companies get an implicit allowance for the labour cost component of their softening costs, which are in Ofwat's base modelled costs, and include actual outturn costs and these observed price effects. In addition, the labour RPE and true-up adjustment implicitly assumes that the corresponding ex-ante allowances for labour is based on the labour price forecasts.

72. To remedy this issue, Ofwat should apply the same approach to the AMP7 labour and maintenance costs from 2017/18, to account for above inflation increase in labour prices.

73. Based on our top-down analysis, using the ONS's manufacturing wage index data, an adjustment of 14.4% would capture the changes in labour prices between 2017/18 and 2022/23. This approach though would still underestimate the labour and maintenance costs for AMP8 as it relies solely on information from AMP7, which incorrectly does not account for overtime costs. We recommend then that Ofwat accept our claim and allow in full our labour and maintenance costs for the opex associated with softening.

74. In summary:

- Our labour and maintenance costs have been estimated from the bottom-up, on a site-by-site basis, and represent our view of the efficient costs to operate our five WTWs and deliver the softening requirements;
- Overtime costs, which are a key component of our overall labour and maintenance costs, were incorrectly not included in our previous softening costs claim for AMP7.
- In Ofwat's draft determination, it has failed to capture the recent price effects on labour costs up to the 2022/23 base year and our additional overtime costs. Ofwat's assessment of our CAC is inconsistent with its approach and treatment of base modelled costs.
- Therefore, Ofwat need to treat the labour and maintenance costs associated with our opex for softening in the same way that it has proposed to treat base modelled costs, i.e. to ensure that price effects are accounted for in the base year cost to roll forward into AMP8.
- We recommend Ofwat allow the labour and maintenance costs component of our opex CAC, £2.47 million for labour and £1.70 million for maintenance including labour (before RPEs and OE), in full in its final determination (an increase of £1.05 million and £0.98 million respectively, before RPEs and OE, from its draft determination).



Other costs

75. Other opex costs cover a range of ad-hoc items which are driven by our need to soften. These costs are associated with fixed activities at each of our five WTW sites and include:

    - Materials and consumables;
    - Stores;
    - R&M plant;
    - Sundry plant;
    - Instrument maintenance;
    - General apparatus; and
    - Bought-out services.

76. This expenditure predominately relates to the replacement of mechanical, electrical or instrumentational equipment as direct consequence of our softening obligations and that is not capitalised because of its relatively small value. It also covers the provision of external specialist services required in operational maintenance tasks on assets associated with softening. The cost apportionment of these activities is assigned on the same basis as labour and maintenance, as previously set out.

77. These costs are driven by activities undertaken by our own staff in the operation and maintenance of our softening processes or external service providers where most specialist skill sets beyond our own in-house capabilities are required.

78. Broadly, our expenditure requirements for this cost area are driven by the levels of capex work carried out, and the reactive maintenance required. For example, at WTW sites where we have completed significant capex works, we would likely observe reductions in the levels of other opex required. This has been the case at Woodmansterne, Godstone and Elmer since 2017/18. However, where we have softening issues that requires specialist types of maintenance work, that can't be capitalised in any given year, we will witness increases in these other opex costs.

79. Our approach to forecasting these costs as part of our original CAC, included a bottom-up analysis of the specific operational requirements across the five WTW sites. In 2022/23 our total other opex costs across the five WTW sites were approximately £0.2 million per annum (2022/23 prices). These outturn costs have been used to forecast our total other opex costs across AMP8 of £0.98 million.

80. We recommend that Ofwat accept our claim and allow in full our other opex costs associated with softening.

C. Capex

81. As part of our CAC, we proposed capex costs of £13.96 million (before RPEs and OE), which included expenditure at Kenley WTW as well as some other ongoing capital maintenance and replacement expenditure across our softening assets at the four additional WTWs, a breakdown of which is provided in Table 6 below.

Table 6: Breakdown of total capex costs for AMP8 across Kenley and other

Capex costs (£ million)	AMP8 (2022/23 prices) (before application of RPEs + OE	AMP8 (2022/23 prices) (after application of RPEs + OE
Kenley	11.79	11.61
Other	2.17	2.10
Total	13.96	13.71

Source: SES Water

82. The softening equipment at Kenley WTW, which was last significantly upgraded in 1985, has become increasingly unreliable and costly to maintain. To ensure continued compliance with our water quality obligations, we identified the need for substantial investment in this equipment during the AMP8 period. The proposed works involve replacing the aging water filters at Kenley WTW, which have been estimated at a cost of £13.1 million, £11.79 million of which we can attribute to our requirements to soften.[15] This investment is crucial for maintaining the operational integrity of the softening process, which is integral to the success of the downstream process to ensure overall water quality.

83. Beyond the primary investment at Kenley WTW, we have allocated £1.02 million for planned maintenance upgrades across the rest of our softening assets, of which £0.80 million relates to capital investment at Elmer WTW. Additionally, our proposed capex includes £0.52 million for the replacement of resin at Cheam WTW and £0.63 million for reactive capital maintenance of our softening assets, as set out in Table 7 below.

Table 7: Breakdown of other capex costs

Other capex costs (£ million)	AMP8 (2022/23 prices) (before application of RPEs + OE	AMP8 (2022/23 prices) (after application of RPEs + OE
Planned maintenance	1.02	0.99
Resin replacement	0.52	0.49
Reactive capital maintenance	0.63	0.61
Total	2.17	2.10

Source: SES Water

84. Ofwat has challenged our CAC for capex on two main grounds:

[15] Assumption that there is a 90% dependency on the filters for softening, compared to 100% assumption that has been used in previous claims at previous price reviews.

- Optioneering – Ofwat considers that we have not provided sufficient evidence on whether alternative options instead of the replacement of filters at Kenley WTW were assessed.
- Cost efficiency – Ofwat considers that the replacement of water filters is a common activity that other water companies have previously delivered, and that we should be able to benchmark our proposed costs for Kenley WTW against these costs.

85. In response, Ofwat has applied a 20% optioneering challenge and a 20% cost efficiency challenge, leading to a total capex cost adjustment of £7.84 million.[16] Ofwat did not refer to our other capex works in its draft determination, but included these costs within its optioneering and cost efficiency challenge, which we think is in error. We also do not think that there is a strong basis for this size of adjustment. For example, when compared to the base cost modelling, Ofwat applies a catch-up challenge of less than 1% and a frontier shift based adjustment of 1%. The size of both the optioneering and cost efficiency challenges in comparison appear to be much more demanding.
86. In the following sub-sections we provide further supporting information and evidence to address these optioneering and cost efficiency challenges raised by Ofwat in its draft determination.

Optioneering

87. All of our proposed capital projects, including those at Kenley WTW, were subject to a robust optioneering process, ensuring all feasible alternatives were thoroughly considered and evaluated. This process typically involves technical assessments, cost-benefit analysis, consultation with industry experts and framework suppliers and PIONEER modelling to identify the most effective and cost-efficient solutions.
88. PIONEER is an established system that we have used to assess capex in previous AMPs. The PIONEER modelling system selects interventions (asset replacements or refurbishments) as required in order to maintain a stable level of serviceability at minimum cost, or to achieve a step-change in serviceability (where justified by customer research or regulatory requirements).
89. The investment at Kenley WTW is essential and was identified as a required planned intervention through our PIONEER modelling due to aging water filters, which have reached the end of their operational life. Replacing these filters is critical if we are to continue plant operation and delivery of our water softening and overall water quality obligations.
90. We considered the following options for the Kenley WTW capital investment works after conducting stakeholder engagement and holding an options review workshop, which allowed us to narrow down and select the three options to progress further:
    - Option 1: Full replacement of the existing water filters with rapid gravity filters (RGFs).
    - Option 2: Refurbishment of the existing water filters.
    - Option 3: Introduction of alternative softening technologies along with refurbishment of the existing water filters.
91. After careful evaluation, with consideration given to the wider value of each option, including whole life costs and embodied carbon emissions, the most suitable solution identified was Option 1 – full replacement of the existing water filters with RGFs. We have since carried out a re-evaluation of the alternative options, but Option 1 remains the best

[16] Ofwat clarified in response to our query (OFW-IBQ-SES-003) that this was based on a 40% adjustment on the £13.1 million capex value.

value option, because of the operational reliability and cost effectiveness of RGFs. We outline below why the other options identified were dismissed.

92. Option 2, refurbishment of the existing water filters, was dismissed in part, because the key parts necessary for maintaining the existing filters have become obsolete. This would create significant operational challenges for us in terms of sourcing suitable replacements and carrying out effective refurbishment. The existing water filters are no longer considered the best option for potable water treatment. Advances in technology have rendered them less efficient compared to newer filter systems that offer better performance and reliability.

93. In addition, the existing filtration plant operates with only three water filters, which according to an independent third-party report,[17] is insufficient for handling the Kenley WTW design flow of 45Ml/d. The limited number of water filters results in excessive flow variations during backwashing, which in turn causes instability in chemical dosing downstream. This instability can severely impact the overall effectiveness of the water treatment process and requires the temporary cessation of softening to resolve. The independent report suggested that such a flow rate would require at least six RGF units to effectively manage flow fluctuations. The existing filters at Kenley WTW are of Enelco filter specification which is no longer considered best practice by the Drinking Water Inspectorate (DWI).

94. The costs quoted for refurbishing the existing water filters were estimated at around £6.0 million, (approximately 50% of the cost associated with asset replacement). While this represents a lower initial capital investment, relative to Option 1, the identified risks and issues, such as flow fluctuation problems and chemical dosing instability, will incur significant additional costs over the lifetime of the asset. The combination of these factors; obsolete parts, insufficient capacity, and outdated technology, led to the conclusion that Option 2, refurbishing the existing filters, despite lower initial costs, would not be a viable or cost-effective option.

95. Option 3, introduction of alternative softening technologies along with refurbishment of the existing water filters, was identified during the pre-engagement phase with the market as part of a tender options evaluation process for Kenley WTW capital investment. This procurement exercise was aimed at exploring alternatives to more traditional asset-based solutions, aligned with our commitment to fostering innovation and driving best value for our customers.

96. The most viable option identified from this procurement process, for comparison with Option 1 and 2, the more traditional asset replacement and refurbishment solutions, was a proposal from Veolia Water Technologies (VWT). The VWT proposal addressed our key project drivers and offered proprietary solutions as alternatives for both the clarification and softening processes. Additionally, the recommended alternative process can achieve Polyfluoroalkyl Substances (PFAS) removal, which is an emerging risk for all water companies, although not currently a specific issue at Kenley WTW.

97. The decision to dismiss Option 3 was primarily driven by cost considerations and operational needs. The VWT solution was estimated at £[redacted] for the core process unit alone (with the addition of the necessary civils and mechanical and electrical works increasing this cost by and estimated 30-60%) but, while less expensive than Option 1, it would still necessitate the refurbishment of the existing filters (Option 2) at an additional cost of £6.0 million to ensure compliance with water quality standards.

98. Although the VWT proposal was not deemed suitable for this project due to cost and operational challenges, including those identified for Option 2, we recognise the value it offers in key areas, including in mitigating potential future risks. We will continue to collaborate with suppliers to identify and explore alternative processes, and while this

[17] Mott Macdonald Feasability Report, September 2013

particular solution will not be implemented for the current capital investment works at Kenley WTW, it will be considered as an option for future projects.

99. In summary, for Kenley WTW, we carried out a full and comprehensive optioneering process, which included the assessment of traditional solutions with alternative, innovation solutions. Our overall assessment was, and remains, that Option 1, replacement of the existing water filters at Kenley WTW with RGFs, remains the most appropriate solution.

100. The other capex works that we forecast as part of our CAC were subject to an optioneering challenge by Ofwat in its draft determinations. We rebut Ofwat's arbitrary challenge of these costs, which are associated with planned maintenance works, resin replacement at Cheam WTW, and reactive capital maintenance works.

101. These activities are relatively binary in nature and do not lend themselves to an optioneering assessment akin to that carried out for the replacement of filters at Kenley WTW. The options available to us are to either carry out the activities, maintaining the operation of plant critical to the delivery of our softening requirements, or the cessation of these activities and our softening altogether, which is not a viable option and would result in non-compliance with our obligations.

102. In addition, the relatively low materiality of these works would call into question the value of carrying out a full optioneering assessment, where viable alternative options are available, which as described above can entail cost-benefit analysis, consultation with industry experts and PIONEER modelling.

103. For the reasons outlined, we think Ofwat is unjustified in applying a 20% optioneering challenge to our forecast capex of £11.79 million at Kenley WTW, and our other capex costs of £2.17 million across all our WTW sites. In Ofwat's final determination, we recommend that this adjustment is revised in line with our original submission.

Cost efficiency

104. For the forecast capex at Kenley WTW, we employed a comprehensive benchmarking approach to ensure our cost estimates were both accurate and efficient. This process involved several reputable sources and methodologies, including use of historic outturn costs, PIONEER modelling, comparative benchmarking and third-party assurance.

105. The costs from our PIONEER modelling exercise estimated the total capex for Kenley WTW at £13.1 million, based on a planned intervention cost of £4.4 million for each of the three existing filters. The claim for softening assumes 90% of the £13.1 million capex at Kenley WTW is attributable to softening, resulting in a CAC value of £11.79 million. This 90% assumption represents a more conservative estimate when compared to previous CACs, which assumed 100% of these types of costs were attributable to our requirements to soften and was accepted by Ofwat.

106. To validate this estimate we engaged AtkinsRealis, one of our independent framework consultancy partners, to provide an updated cost estimate based on a bill of quantities produced for our PR19 Business Plan submission. The revised AtkinsRealis cost estimate for the works at Kenley WTW was £12.1 million (which once the 90% adjustment was applied, represented an approx. £0.9 million reduction against our original CAC).

107. Following this exercise, and in response to a query from Ofwat post submission (OFW-OBQ-SES-051), we revised our view of our capex requirements at Kenley WTW from £11.79 million to £10.89 million. However, since Ofwat's draft determination, we have reconsidered our capex forecast at Kenley WTW, and have revised our forecast back to the estimate in our original CAC. Part of rationale for this is that the AtkinsRealis

cost estimate for Kenley WTW, did not include any allowance for risk, contingency or optimism bias. Given the complexity of the works, and the risks that we are exposed to, this was an oversight and error on our part.

108. For example, during AMP6 we delivered works at Woodmansterne WTW, which included the replacement of aging water filters with RGFs, similar to what we have proposed for Kenley WTW during AMP8. The average of three quotes for Woodmansterne for the replacement of RGFs was £8.34 million, which when adjusted for the Construction Output Price Index (COPI), amounts to £11.4 million in 2022/23 prices. While this figure is consistent with our original estimate for Kenley WTW, and thus helps to evidence the efficiency and ambition of our capex forecasts, it is important to note that the works at Woodmansterne WTW were less complex to deliver. Woodmansterne WTW consists of a standalone building, while Kenley WTW has a more complex set up and confined footprint, which introduces additional challenges in delivery. These challenges will drive up the costs for delivering these works at Kenley WTW, relative to those at Woodmansterne WTW.

109. Additionally, following Ofwat's draft determination we carried out further cost benchmarking with support from another consultancy partner, ChandlerKBS, a specialist in capital allowances and fixed assets advisory services. Using the benchmarking information provided by ChandlerKBS, which includes forecasts from comparator water companies, we were able to re-estimate the cost of our preferred option, Option 1, at £13.3 million (a £0.2 million increase on our original estimate).

110. This layered cost efficiency assessment incorporating PIONEER modelling, historical outturn costs analysis of comparative activities, third party assurance from AtkinsRealis and comparative benchmarking with support from ChandlerKBS ensures our cost estimates are both robust and efficient.

111. In summary, we consider that the process that we have went through provides sufficient evidence, in response to Ofwat's challenge in its draft determination, that our original capex forecast of £11.79 million for Kenley WTW remains appropriate, and that these costs are efficient.

112. The other capex works that we forecast as part of our CAC were also subject to a cost efficiency challenge by Ofwat in its draft determination. We strongly rebut Ofwat's arbitrary challenge of these costs, which are associated with planned maintenance works, resin replacement at Cheam WTW, and reactive capital maintenance works. As noted in the previous section, these costs are of lower materiality than the Kenley WTW, and as such have not been subject to the same level of comparative benchmarking and third-party assurance. However, they have been informed by our PIONEER modelling, which ensures that the investment delivers the required output, while minimising the cost.

113. For the reasons outlined, we consider that Ofwat is unjustified in applying a 20% cost efficiency challenge to our forecast capex of £11.79 million at Kenley WTW, and our other capex costs of £2.17 million across all our WTW sites. The cost assessment processes that we undertake are comprehensive, in line with industry best practice, and ensure that our capex forecasting is both robust, and efficient. Moreover, this size of challenge on the efficiency of our costs is over 20 times larger than the catch-up efficiency challenge applied to base modelled costs, which we consider to be excessive, arbitrary and without basis. This is discussed further as part of our representations in Appendix SES110 - Enhancement Efficiency Challenge.

D. Price Control Deliverable

115. Ofwat has introduced a price control deliverable (PCD), rather than the proposed bespoke performance commitment (PC), to return funding to consumers if investments are not delivered. Under the PCD, we will need to deliver our investment in softening equipment at Kenley WTW along with the other capex investment related to softening. Capex will be returned to consumers if we do not deliver the capital investment schemes set out in the CAC.

116. In delivering our investments in softening, we are required to report our opex and capex in our annual performance reports alongside an annual water softening report. This report will provide:

- a review of our performance against the 80mg/l water softening target; and
- capex investment delivery summary.

117. We are also expected to provide Ofwat with evidence of completion of our PR19 capex investment, before investing our PR24 capex allowance.

118. Ofwat propose to return the capex component of our allowances to customers if we do not deliver the capital investment schemes set out in our CAC, based on the year-by-year breakdown in the table below.

Table 8: PCD outputs (per annum) £m, 2022/23 prices after RPEs and OE

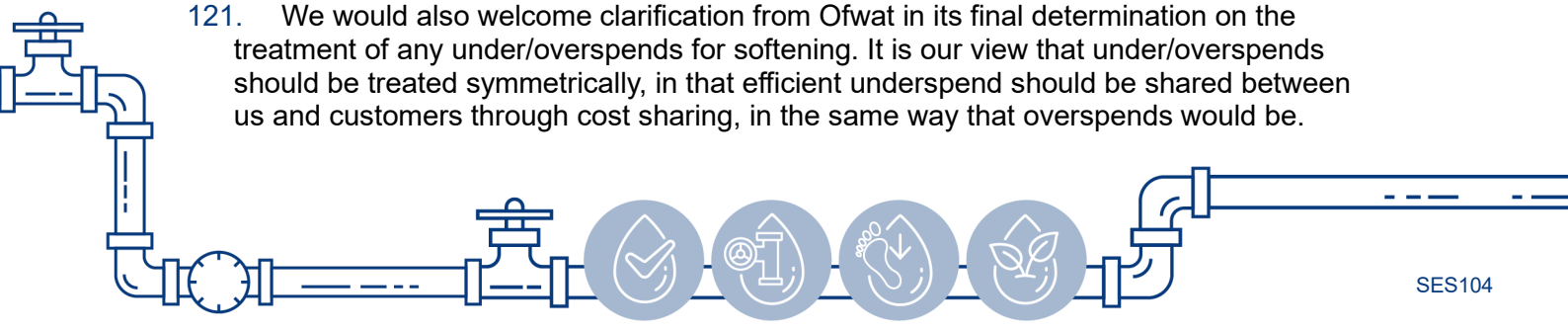
PCD outputs (per annum)	2025/26	2026/27	2027/28	2028/29	2029/30
Softening equipment at Kenley WTW	3.18	6.34	6.34	6.34	6.34
Other capex investment	0.12	0.24	0.56	0.67	0.97

Source: Ofwat PR24 Draft Determinations

119. We understand that this profile is based on our capex forecast, as set out in our CAC, adjusted for Ofwat's allowed CAC at draft determination. However, it is not clear from Ofwat's draft determination how this penalty will be implemented in practice. For example, whether Ofwat propose to return our allowed capex at Kenley WTW to customers in full in 2026/27 if we have not managed to deliver these works. It should also be noted that other variables outside our control may also affect water softness (e.g. quality of the raw water, site throughput, pH, pellet production, and draw-off rates).

120. We request that Ofwat provides clarification on this in its final determination. We consider that what matters most to customers is whether the works that we have been funded for are delivered during AMP8, not whether the works are delivered at the start or the end of the period. By imposing an in-period penalty, Ofwat may unnecessarily reduce our ability to prioritise the wide array of works that we carry out, and flexibly respond to any issues that arise within the period, even if they have potential to deliver greater value for money and benefit to customers. Any approach that seeks to arbitrarily penalise us for delays to delivery within period, including those outside our control, will increase our overall risk exposure. Our target to deliver the 80mg/l water softening provides a strong incentive to deliver our works in a timely manner. Ofwat should consider this when it provides clarity in its final determination on the operation of these PCDs.

121. We would also welcome clarification from Ofwat in its final determination on the treatment of any under/overspends for softening. It is our view that under/overspends should be treated symmetrically, in that efficient underspend should be shared between us and customers through cost sharing, in the same way that overspends would be.



122. Finally, Ofwat propose that opex should be returned based on a unit rate charged to each milligram of calcium per litre deviation above the 80mg/l target. Ofwat comment that the calculation of this unit rate mirrors the approach we proposed for the softening output delivery incentive (ODI). Ofwat's calculation of this unit rate assumes that the variable opex allowance for AMP8 is £7.46 million, which we were not able to reconcile with the wider cost allowances proposed by Ofwat in its draft determination. In response, we submitted a query to Ofwat (OFW-IBQ-SES-005), which Ofwat have since responded to, acknowledging its error in calculating the allowance value by incorrectly applying RPEs and OE.

123. We note Ofwat's response in relation to its error and expect it to be addressed as part of final determination. We also note that in remedying this error Ofwat will need to update our opex allowance in response to the other representations that we have set out in this document.