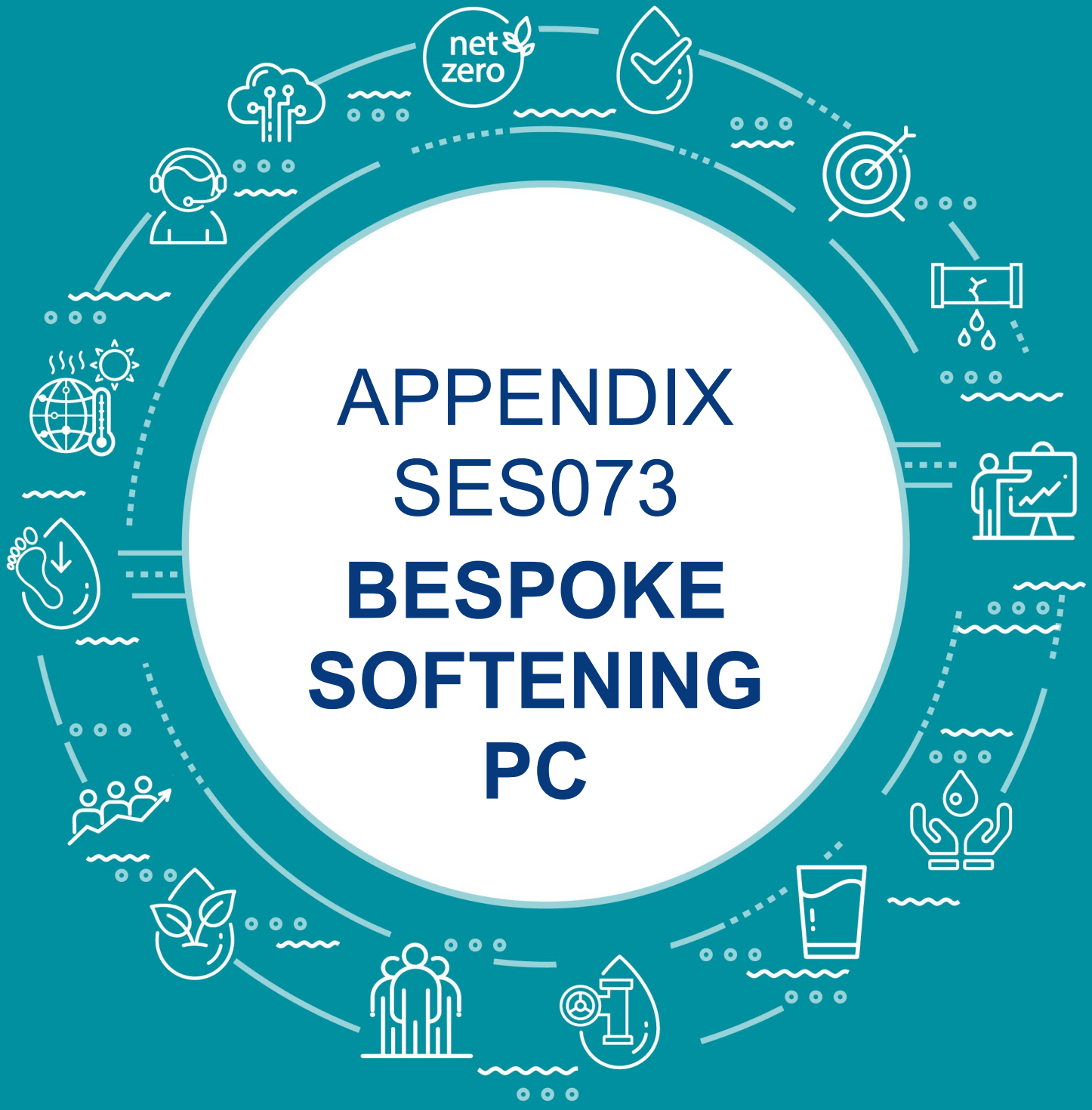
ses WATER



APPENDIX SES073

BESPOKE SOFTENING PC

Contents

APPENDIX SES073: BESPOKE SOFTENING PC

This appendix provides the supporting evidence to our proposed bespoke Performance Commitment (PC) for softening.

It builds upon our April 2023 submission to Ofwat on the proposed PR24 Bespoke Performance Commitment Definition and takes on board the feedback Ofwat provided on this submission following its assessment of our proposed bespoke PC.

The updated bespoke PC definition template is attached as an annex to this short appendix as a separate document.

A. Introduction

1. This appendix summarises the definition and regulatory case for a bespoke performance commitment related to our statutory obligation to partially soften the water from its groundwater sources (across five named treatment works).
2. We welcome Ofwat's early feedback[1] that it considers our proposed measure could be suitable for a bespoke PC. In this appendix we repeat the case for why a bespoke PC should be in place for PR24 and update our submission to take on board Ofwat's feedback on our earlier submission.
3. The rest of this appendix is structured as follows:
    - Section B – repeats our answers to the supporting evidence that Ofwat requested on the justification for a bespoke ODI.
    - Section C – summarises the changes that we have made to our submission to take on board Ofwat's feedback and provides cross references to other parts of our business plan that set out our bespoke ODI proposals.
    - Annex A provides our updated bespoke ODI template, consistent with Ofwat's guidance and feedback.

B. Supporting evidence to support the bespoke PC

4. Ofwat has requested a range of supporting evidence to support the case for a bespoke PC in PR24. In the subsections below we provide that supporting evidence and information, also cross referencing to our parts of our business plan that set out aspects of this information in further detail.

Please explain how the PC measures a key outcome that is likely to be important in future price reviews as well as the PR24 period.

5. SES Water is the only appointed company in England and Wales which has a statutory obligation to partially soften the water from its groundwater sources (five named

[1] Ofwat (30 June): 'Detailed assessment of potentially suitable bespoke performance commitments'

treatment works). This obligation comes from the Caterham Spring Water Company Act 1862 and the Sutton District Waterworks Act 1903, as amended in 1983.

6. A PC and associated ODI was introduced for the period 2015-2020 related to the delivery of our water softening programme. Following its completion, the PC was not continued into the 2020-2025 period in that form. At PR19, a bespoke PC was introduced by Ofwat given SES requested a cost adjustment claim to continue to provide softened water for the 2020-2025 period. This bespoke PC was to incentivise SES Water to provide partially softened water to its customers on a consistent basis across its five named treatment works.

7. As the statutory obligation to partially soften water remains in place and is likely to remain in place in the foreseeable future, we will continue to soften water at PR24 (and beyond, as applicable), and consequently expect to be subject to a bespoke PC, as defined at PR19. We are not seeking to change the PC level for this bespoke PC at PR24. Instead, we would like to maintain the PC level arrangements already in place at PR19.

8. In its feedback on our early submission Ofwat note that "*The description of the benefits has been carried over from PR19 final determinations 'Outcome performance commitment appendix', with no extra benefits added for the PR24 proposal*."[2] While the case for a bespoke softening PC in PR24 largely builds upon the rationale for why it was introduced in PR19, we note that in preparing our business plan we have considered the customer feedback and benefits case from SES Water's softening activities, as set out in our separate cost adjustment claim for softening costs – see Appendix SES029.[3]

9. At a high-level, this set outs the base expenditure that we expect to require in the PR24 period to support our softening obligations, how we track customer feedback and attitudes to the hardness of the water customers receive (which impacted how we approached defining the bespoke PC for PR24) and an update to the benefits estimates that we consider softening processes carried out by SES Water generates in terms of cost savings for customers.

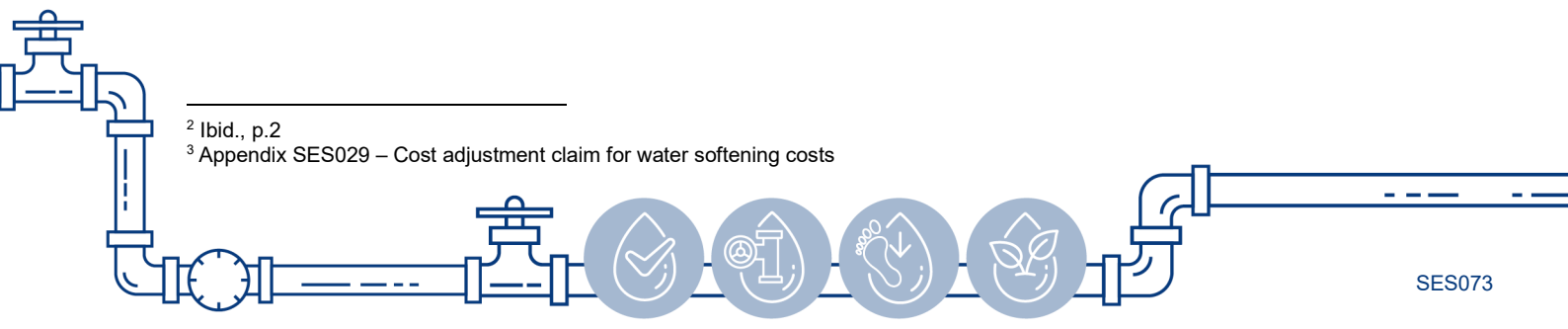
10. In summary, we track attitudes to the hardness of the water customers receive. In 2022 58% of customers were satisfied with the hardness/softness of the water received which has influenced how we approached the definition of the bespoke PC for PR24 as we have interpreted this feedback that customers support our current approach to optimising the extent of softening.

11. As Annex A of our softening cost adjustment claim also seeks to highlight, there are net financial benefits from SES Water's softening activities to customers as the cost per customer of the softening process is lower than the cost of the increased use of detergents and sales, increased replacement rate of household goods and the installation and maintenance of in-home softening devices. We updated these savings estimates for PR24 in formulating both our bespoke PC and the associated cost adjustment claim for our business plan submission.

Explain how the PC is focussed on customer service, and/or the environment and/or resilience including asset health.

12. This bespoke performance commitment is in place given SES Water has a statutory obligation to soften the water from five named treatment works. See comments above on how we have taken into consideration customer feedback and support in defining our proposed bespoke PC.

[2] Ibid., p.2
[3] Appendix SES029 – Cost adjustment claim for water softening costs



Explain how PC addresses a company specific issue or is an area where the company requires improvement. If the PC could be reported by other companies please explain why it is appropriate for it to be a bespoke PC rather than a common PC.

13. As we are the only appointed company in England and Wales which has a statutory obligation to partially soften the water from its groundwater sources (five named treatment works), this bespoke PC addresses a company-specific circumstance.

14. As other companies do not have this requirement to meet, they wouldn't be subject to a bespoke PC on softening, so it is not appropriate to consider this bespoke PC in the context of the wider industry.

Explain briefly how the PC definition is an objective measurement that can be verified by others.

15. The PC definition is an objective measure based on measurements taken three times per week at each treatment works and averaged over a two-week period.

16. The measurement can be verified by others as it is based on water quality sampling and testing. Samples can be taken by any suitably UKAS accredited sampler. Sample details are logged into TAPS and samples are received in Laboratory Information Management Software (LIMS). Analysis is conducted in the UKAS accredited Company Laboratory and results are automatically transferred into LIMS. Should the Company Laboratory be unavailable, analysis is sub-contracted and carried out in an external UKAS accredited Laboratory. We describe this process in Section 1.4 of the bespoke performance commitment definition template.[4]

17. The processes we already have in place for our existing bespoke performance commitment for softening therefore remains an objective measure and is verifiable and reliable over time.

Explain the sources of information which can be used to set a PC level that reflects stretching performance for an efficient company with reasonable confidence.

18. As this bespoke PC is in place to incentivise us in meeting its obligation to partially soften its water, the concept of 'stretching performance' does not apply in this instance. As mentioned in response to Ofwat's first question / criteria above, we are not seeking to change the PC level for this bespoke PC at PR24. Instead, we would like to maintain the PC level arrangements already in place at PR19, that being, the average number of milligrams of calcium per litre by which five named water treatment works fail to meet the fortnightly target reported to two decimal places; with the target for each works being 80.00 mg Cal/l.

If the PC covers similar areas as other PCs explain why this does not lead to significant duplication including how ODIs can be set to avoid double counting.

19. This bespoke PC is unique to us and does not duplicate any other PC already in place.

Other supporting information and evidence

20. Our separate softening cost adjustment claim (Appendix SES029) provides further detailed information on the costs and performance we have achieved related to our softening obligations. We have operated on a 'reasonable endeavours' basis to comply with the agreed level of softening, where stipulated in the statutory obligation and propose to continue to do so in PR24 period.

[4] See Annex A to this appendix.

21. As such, we are proposing to continue to target a level of water softening of 80 mg/l per calcium in the PR24 period (reducing the calcium content from an average of around 120 mg/l when it comes of the ground) in treated water across the five sites where water is softened. Summarised below is the quarterly softening performance of our five sites. The (unweighted) average treated water hardness over the period from Q1 2020 to Q4 2022 across the five sites was 79.0 mg/l Ca. This demonstrates our operations and therefore costs are reasonably well calibrated to the target we have adopted.

Table 1 - Treated water hardness (mg/l)

mg/l	Elmer	Kenley	Godstone	Cheam	Woodman-sterne
Q1 2020	107.0	72.4	72.3	78.8	84.1
Q2 2020	111.7	74.0	74.9	77.2	77.4
Q3 2020	83.6	75.5	73.6	80.6	76.7
Q4 2020	88.0	83.5	69.1	78.4	72.3
Q1 2021	88.6	74.6	72.2	75.7	76.9
Q2 2021	95.7	71.9	74.6	76.4	74.6
Q3 2021	79.7	69.5	75.9	74.8	72.2
Q4 2021	75.2	69.2	72.8	75.6	74.0
Q1 2022	73.7	76.8	76.1	75.5	72.8
Q2 2022	77.0	74.3	79.1	74.9	71.8
Q3 2022	96.5	80.5	102.4	80.5	74.0
Q4 2022	88.4	70.0	94.8	91.3	76.6

Source: SES Water analysis

22. Quarters where the target of 80 mg/l has been missed arose due to a range of demand related issues and asset performance. For example, penalties against our softening ODI in 2021/22 arose largely following the commissioning of new equipment at Elmer.

23. We also took steps to suspend our softening activities in Q3 of 2022 in order to reduce supply risks to our consumers due to increased water demand during a heatwave event in that period.

24. We consider our performance in the current AMP – and the processes for measuring and incentivising achievement of the existing 80 mg/l PC target – provide further supporting evidence and justification for Ofwat continuing with the same bespoke PC definition during the PR24 period. Our internal infrastructure and reporting processes remain in place to ensure robust results and assurance processes in support of the bespoke PC and for the reasons set out above we consider that customers support our current approach to optimising the extent of softening.

C. Changes to our bespoke PC definition submission

25. In Annex A to this appendix, we provide an updated version of Ofwat's bespoke PC definition template. The changes we have made to the document since our earlier submission are as follows:

- Updates to change control processes, following Ofwat feedback.
- Inclusion of a worked example in the template, following Ofwat feedback.
- Updates to reporting and assurance processes, including reference to provision for items to be conducted by a third party and the reports provided on an annual basis alongside the Annual Performance Report submission.
- Reference to information on how shutdowns or omissions should be recorded, again following Ofwat feedback.
- We have integrated “all relevant details contained within the 'SES Water Process Document' in this definition” and the document revised to take account of the PR24 framework.

26. Please refer to the following information in other parts of our business plan associated with this bespoke PC:

- Appendix SES024 sets out the proposed ODI rate associated with the bespoke softening PC and how we propose it is derived.
- Appendix SES029 contains our softening base cost adjustment claim and the justification for the proposed ongoing expenditure that is required to fulfil our softening obligations.

Annex A – Bespoke PC definition template

Please see attached document:

Annex A to Appendix SES073_SES Water Bespoke Softening PC

Water Softening

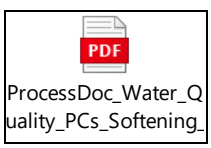
Purpose: This performance commitment is designed to incentivise the company to fulfil its statutory obligations to partially soften water from its groundwater sources.

Benefits: This performance commitment improves the quality of treated water and results in softer water (lower limescale) which reduces costs for customers through using less detergents, decreased replacement rates of household appliances, and reduced maintenance of boiler systems and pipework.

Supporting information: This Performance commitment definition should be read alongside the Company Process Document as referenced throughout this document. A copy of this Company Process Document is available here.[1]

Version control [not required for initial submission, for completion at draft determinations]

Version	Date of issue	Performance commitment changes
0.1		
1.0		
2.0		

[1] 

Performance commitment definition and parameters

1.1 Detailed definition of performance measure

The average number of milligrams of Calcium per litre by which five named water treatment works fail to meet the fortnightly target.

The five water treatment works which require softening under this measure are:

1. Cheam;
2. Elmer;
3. Godstone;
4. Kenley; and
5. Woodmansterne.

The company will sample each treatment works that softens the water (currently five works) three times a week at the works outlet. The hardness tests will represent a uniform regime over time. Any extra tests will not be included.

The target for each works will be 80.00 mg Cal/l, where:

$$\frac{\sum_{i=1}^{26}\sum_{j=1}^{5} Test_{ij} \times \text{Volume}_{ij}}{\sum_{i=1}^{26}\sum_{j=1}^{5} \text{Volume}_{ij}}$$

Test: is the excess, if any, of the average hardness over each two calendar week period against the target for the works. Any amount beyond the target will be recorded to two decimal places. If the average is less than the target, a zero will be recorded.

Volume: is the volume of water supplied over the two weeks from the works in megalitres.

i is one of the five works.

j is one of the two calendar week periods in the year.

A worked example of this calculation and ODI penalty is provided in Box 1 below.

1.2 Additional detail on measurement units

Three samples will be taken each week at the works outlet. The company will calculate the average hardness for each two calendar week period. The timing of the company's water hardness tests will represent a uniform regime over time. Any further samples taken will not form part of the average.

If the company fails to meet the specified rate and timing of sampling in any measurement period on any given softening site, then this will count as a failure for that site and the company will record the measurement as having missed the target by 41.0 mg Cal/l for the site for the measurement period. [2]

Should the company propose to adjust the target for a works during the 2025-2030 period as a result of updates to third-party materials, it will need to do so in accordance with the procedures for changing performance commitments set out in Section 2.5 Appendix 7 – Performance Commitments of Ofwat's Final Methodology for PR24.

1.3 Specific exclusions

The measure excludes the results of random samples taken at customers' taps.

1.4 Reporting and assurance

The timing of the company's water hardness tests should represent a uniform regime over time. Any extra tests will not be included. To distinguish from any additional operational samples, the scheduled hardness test will be given a specific purpose code 'S' within the Laboratory Information Management Software (LIMS). Routinely, the three samples will be planned to be taken on a Monday, Wednesday and Friday.

Performance is verified by an appropriately qualified third party. Samples can be taken by any suitably UKAS accredited sampler. Sample details are logged into Trilogy Advanced Prescheduling System (TAPS) and samples are received in LIMS. Analysis is conducted in the UKAS accredited Company Laboratory. Results are automatically transferred into LIMS. Should the Company Laboratory be unavailable, analysis will be sub-contracted and carried out in an external UKAS accredited Laboratory.

[2] 41.0 mg Cal/l is the different between the calcium content from an average of 121 mg Ca/l when it comes out of the ground and the target of 80 mg Ca/l.

After every sample, LIMS will automatically send an email containing hardness data to the Works Treatment Works Manager and the general Works email address. In addition, any sample of Total Hardness above 80 mg/l as Ca will appear as an alert in the "Sample Failures" mailbox which is reviewed daily by the Water Quality Science team.

Every week, a list of all the hardness results from all the Works will be automatically emailed from LIMS to the Treatment Works Managers and Head of Production.

Works Output is calculated by the Wholesale - Water Strategy team. Works Output will be assured separately. Works Output will be updated at least monthly.

A spreadsheet is used to collate the average hardness over each two-week period and the sum of Works Output for the five softening sites over the same two week period.

For each site, excess Average Hardness over a target for Total Hardness of 80 mg/l as Ca for a two week period is multiplied by the sum of the site Works Output for the same two week period. This is then divided by the sum of the works output for the five softening sites. This value is the measurement unit which is then multiplied by the underperformance payment to determine the ODI penalty. Performance is reported within the Performance Report presented to the Management Team and provided to the Board on a monthly basis.

The text box below provides a worked example of the calculation.

Box 1 – Worked example of the performance measure.

Due to the complexity of the calculation, covering 5 sites and 26 time periods, a full worked example using 2022 data is included within Section 6 of the Company's Process Document (attached).

This is summarised below:

$$\frac{\sum_{i=1}^{26}\sum_{j=1}^{5} Test_{ij} \times \text{Volume}_{ij}}{\sum_{i=1}^{26}\sum_{j=1}^{5} \text{Volume}_{ij}}$$

The measurement unit is calculated from the above formula. It is the sum from 26 time periods over the year. For each time period the excess hardness for each site is multiplied by the volume of water produced for that site and

then divided by the total volume produced by the five sites for each time period.

Example data for a single two-week calendar period (Period 12 of 2022) and screen shots for the data are included below to demonstrate the calculation methodology:

1. Daily works output for Period 12, 06 June to 19 June 2022 inclusive, is recorded and summed for each site.
   e.g. Elmer produced 584.155 Ml from a total softened flow in the period of 2004.840 Ml.

Date	Elmer	Kenley	Godstone	Cheam	Woodmansterne	Total
06/06/2022	34.106	14.565	6.765	38.150	22.107	
07/06/2022	37.241	15.003	6.745	41.880	23.318	
08/06/2022	33.971	15.325	6.772	45.810	25.421	
09/06/2022	45.327	16.166	6.743	46.870	26.425	
10/06/2022	44.286	14.579	6.835	46.820	26.070	
11/06/2022	38.664	15.641	6.726	46.690	26.147	
12/06/2022	36.109	18.667	6.735	46.660	26.180	
13/06/2022	41.491	21.935	6.734	46.810	26.405	
14/06/2022	45.456	25.271	6.790	48.870	25.762	
15/06/2022	45.675	25.161	6.754	50.520	28.210	
16/06/2022	47.307	28.360	6.742	52.530	29.957	
17/06/2022	42.732	29.945	6.482	53.050	30.590	
18/06/2022	49.759	23.192	6.779	53.020	29.881	
19/06/2022	42.031	16.993	6.604	52.780	28.738	
TOTAL	**584.155**	**280.803**	**94.206**	**670.460**	**375.211**	**2004.840**

2. Hardness data is calculated six times over the two week calendar period, on a Monday, Wednesday and Friday on both weeks. The hardness results from these six samples is averaged.

2022							
			ETW001	KTW001	GOD001	SCTW001	SWTW001
Two Week Calendar Period	Day	Date	Elmer Hardness Result	Kenley Hardness Result	Godstone Hardness Result	Cheam Hardness Result	Woodmansterne Hardness Result
12	Monday	06/06/2022	65.7	79.5	72.9	70.4	91.2
12	Wednesday	08/06/2022	71.0	83.0	75.1	74.1	69.0
12	Friday	10/06/2022	69.6	96.3	74.6	74.5	72.2
12	Monday	13/06/2022	106.5	66.5	73.5	68.8	70.7
12	Wednesday	15/06/2022	109.9	77.0	75.8	71.3	72.2
12	Friday	17/06/2022	107.6	84.6	77.2	72.7	71.3
Period 12 Average			88.38	81.15	74.85	71.97	74.43

e.g. The average hardness for Elmer from the six samples in the period was 88.38 mg/l.

3. The excess hardness is calculated as the number of mg/l over 80 mg/l for each site.
   e.g. The excess hardness for Elmer for the period is 8.38 mg/l (88.38 – 80.0).

4. The excess hardness is then multiplied by the works output from each site and summed.
   e.g. For Elmer the excess hardness of 8.38 multiplied by the Works output of 584.155 gives a value of 4895.22 mg/l.Ml

5. The sum of Excess x Works Output is then divided by the total works output for the five sites during the period. The result is the measurement unit for that period.
   e.g. For the period the sum of Excess x Works Output for all five sites is 5218.14 mg/l.Ml. Dividing this by the sum of the works output for the same period of 2004.84 gives a measurement unit of 2.60 (5218.14 / 2004.840)

Works	Hardness	Excess Hardness	Works Output	Excess x Works Output	Measurement Unit
Elmer	88.38	8.38	584.155	4895.22	
Kenley	81.15	1.15	280.803	322.92	
Godstone	74.85	0.00	94.206	0.0	
Cheam	71.97	0.00	670.460	0.0	
Woodmansterne	74.43	0.00	375.211	0.00	
TOTAL	-	-	**2004.840**	**5218.14**	**2.60**

6. The sum of the Excess Hardness x Works Output for each of the 26 time periods is summed (a), as is the sum of the Works Output for the 26 time periods (b). Dividing (a) by (by) gives the measurement unit for the year.

2022 Data:

	Total			
Two Week Calendar Period	Σ Test x Volume (to 2 dp)	Total Works Volume from the 5 softening sites (Ml) (to 3 dp)	Measurement Unit (to 1 dp)	Underperformance Penalty (£)
1	0.00	1872.720	0.00	
2	0.00	1882.860	0.00	
3	0.00	1852.180	0.00	
4	0.00	1845.050	0.00	
5	0.00	1791.820	0.00	
6	1251.96	1821.300	0.70	
7	0.00	1738.460	0.00	
8	0.00	1831.990	0.00	
9	170.77	1908.190	0.10	
10	0.00	1906.690	0.00	
11	2849.35	1842.300	1.50	
12	5218.14	2004.840	2.60	
13	3154.87	2099.890	1.50	
14	23655.74	2414.960	9.80	
15	31143.56	2226.210	14.00	
16	32140.88	2236.810	14.40	
17	15463.81	1937.690	8.00	
18	0.00	1881.720	0.00	
19	18648.19	1837.110	10.20	
20	42796.59	1839.590	23.30	
21	30153.18	1803.640	16.70	
22	10617.52	1784.770	5.90	
23	1498.91	1801.820	0.80	
24	14211.53	1871.670	7.60	
25	13789.02	1896.250	7.30	
26	32725.81	2022.650	16.20	
	279489.83	49953.180	5.60	£ 157,920

e.g. Dividing the sum of Excess Hardness x Volume (279489.83 mg/l.Ml) by the Total Works Output from the five sites (49953.180) gives the measurement unit (5.60 mg).

7. Multiplying the measurement unit by the ODI penalty rate gives the Total Annual Financial Penalty for this Performance Commitment. (The ODI Penalty Rate for AMP 7 is -£0.0282m)
   e.g. 5.60 x -£28,200 = -£157,920

Specific Detail specified within the Company Process Document

- Routinely, samples will be taken every Monday, Wednesday and Friday from the treated water point from the five softening sites. Where a treated water compliance sample is scheduled to be taken, the hardness test will be analysed from this sample. Where there is not a treated water compliance sample (e.g. Wednesday's at Godstone), a separate sample will be scheduled and taken.
- Average hardness is to be calculated over each two-calendar week period. Therefore, the average hardness for each two-calendar week period will comprise of six hardness tests
- If it is not possible to take a sample from a site on the scheduled day, for example due to a works shutdown, and there is no flow leaving the site over the remainder of the 24-hour period, this will NOT be deemed as a site failing for the measurement period if a sample is taken on restoration of flow from the site with the next treated water compliance sample.

- The sample schedule for each site is pre-scheduled. If it is required to change the routine day of sampling (e.g. due to the usual reduced resourcing either onsite or within the laboratory over statutory national holidays), then this shall be documented as a comment within LIMS, ahead of the sample being taken, describing why the usual routine uniform regime over time was changed.
- Due to the calculation methodology, there will be 26 equal two-calendar week periods over which hardness tests will be carried out at a rate of three tests per week. The measurement timing for this Performance Commitment is calendar year. The two-calendar week period shall always run from a Monday to a Sunday.
- To ensure 26 equal two calendar week periods in each report year the date of commencement and date of year end for each report year shall be

Report Year	Commencement Date	Year End Date
2025	06-Jan-25	04 Jan 2026
2026	05-Jan-26	03 Jan 2027
2027	04-Jan-27	02 Jan 2028
2028	03-Jan-28	31 Dec 2028
2029	01-Jan-29	30 Dec 2029

- Works Output is calculated in Megalitres and reported to three decimal places.
- The Laboratory hardness test reports hardness results to one decimal place.
- If it is not possible to take a sample from a site on the scheduled day, for example due to a works shutdown, and there is no flow leaving the site over the remainder of the 24-hour period, this will NOT be deemed as a site failing for the measurement period if a sample is taken on restoration of flow from the site with the next treated water compliance sample.
- If a site is shut down for maintenance, then the Works Output for the site is zero, therefore it should NOT be deemed as a site failing for the two-week calendar period as it is not in service. In these circumstances, only the usual number of samples whilst the site was in service will be used in that period to calculate the average hardness.
- The process of dealing with omissions shall be as per the Guidance issued by the Drinking Water Inspectorate for compliance sampling at treatment works, in accordance with Regulation 13 of the Water Supply (Water Quality) Regulations 2016 (as amended). The Guidance is available on the Drinking Water Inspectorate website[3].
- If there is an instrumentation failure or operational problems with achieving the analytical performance requirements (e.g. system

[3] http://www.dwi.gov.uk/stakeholders/guidance-and-codes-of-practice/wswq/index.html

suitability or analytical quality control) within the laboratory the samples will be analysed as soon as practicable within the shelf life of the sample. If necessary, the sample will be outsourced to an external UKAS accredited Laboratory.

External assurance will be carried out every year as part of the Annual Performance Report submission:

- Works Output is assured as part of the annual audit process;
- laboratory instrument for measuring hardness and the method is assured as part of the UKAS laboratory accreditation; and
- compliance with SES Water Process Document is assured as part of the annual audit process.[4]

As has been the case in AMP7 external assurance reports will be provided on an annual basis alongside the Company's Annual Performance Report submission.

Compliance checklist

This performance commitment is based on water quality sampling (mg Ca/l) and performance is calculated using a mathematical equation.

SES Water has a Process Document that describes at length the sampling, calculations, internal checks, external assurance and reporting processes that are followed.

The company shall complete the checklist below and report to Ofwat if any element is not green. Where an element is not green, we may intervene to protect customers and ensure that the company does not benefit from insufficient data quality. See Annex 1 for assessment rules for each element.

[4] See Section 5 of the Company Process Document. See Supporting Information (Page 1) for a copy of the Process Document

Table 1 Compliance checklist for water softening

	Component / Element	Component R/A/G	Element R/A/G	Reason for any non-compliant component	Confidence grade
1	**Coverage**	**G**	**G**	**NA**	**A1**
1a	Samples are taken from the five named treatment works	G	G	NA	A1
2	**Testing**	G	G	NA	A2
2a	Samples are taken three times per week at each of the five softening sites	G	G	NA	A1
2b	Calculation of the average hardness over each two-week period for the five softening sites	G	G	NA	A1
2c	Calculation of volume of water supplied over each two-week period for the five softening sites	G	G	NA	A2

Table 2 Definition parameters

Parameters	
Measurement unit and decimal places	The average number of milligrams of Calcium per litre by which five named water treatment works fail to meet the fortnightly target reported to one decimal place.
Measurement timing	Calendar year
Incentive form	Revenue
Incentive type	Underperformance
Timing of underperformance and outperformance payments	In-period
Price control allocation	100% water network plus
Frequency of reporting	Annual, on a calendar year basis. For example, performance assessment for 2025-26 will be based on the

Parameters	
	calendar year 2025, whereas 2029-30 assessment will be based on the calendar year 2029.
Any other relevant information	The company has obligations to provide softened water to around 244,000 properties. Its water softening obligations date from 1862 (the Caterham Spring Water Company Act) and 1903 (Sutton District Waterworks Act as amended in 1983). In the Sutton District Waterworks Act the level of hardness is defined and in the Caterham Spring Water Company Act it is just required to soften the water. In an average year, the five named treatment works in Section 1.1 above provide around 81% of the water supplied to its customers. For the Sutton District, which is subject to a defined level of required softening of 68.6 mg Ca/l, the company provided evidence to Ofwat at the PR19 determinations from the Sutton Council (with jurisdiction to enforce) that the local authority is satisfied with the company softening water to a level of 80.0 mg Ca/l of on average (reducing the calcium content from an average of 121 mg Ca/l when it comes out of the ground) in treated water across the five treatment works, which is less stringent than the limit set in the Sutton District Waterworks Act 1903 (as amended) that covers part of the company's supply zone. The company has communicated this arrangement to the Drinking Water Inspectorate (DWI) and this bespoke performance commitment is based on the premises that the company continue to operate at this target level.
Links to relevant external documents	SES Water Process Document[5]

[5] See Supporting Information (Page 1) for a copy of the Process Document

Annex 1 Compliance Checklist

This annex sets out the criteria on which to report checklists where specified in the performance commitment definition.

Compliance for elements is reported against:

R	Not compliant with the guidance and having a material impact on reporting
A	Not compliant with the guidance and having no material impact on reporting
G	Fully compliant with the guidance

An overall RAG to be assigned for each component based on the following rules: Compliance for overall components is reported against:

R	There are one or more red elements in the component, or the combined effect of amber elements is considered to produce a material impact.
A	Half or more of the elements in the component are amber and the combined effect of the amber elements is considered not to produce a material impact
G	More than half of the elements in the component are green

For each component on the checklist, and for the overall performance measure, the company will report a confidence grade. Confidence grades provide a reasoned basis for companies to qualify the reliability and accuracy of the data.

The company shall employ a quality assured approach in the methodology used to assign confidence grades, particularly if sampling techniques are in place. The confidence grade combines elements of reliability and accuracy, for example:

A2 – Data based on sound records etc. (A, highly reliable) and estimated to be within +/- 5% (accuracy band 2) Reliability and accuracy bands are shown in the tables below.

Reliability Band	Description
A	Sound textual records, procedures, investigations or analysis properly documented and recognised as the best method of assessment.

B	As A, but with minor shortcomings. Examples include old assessment, some missing documentation, some reliance on unconfirmed reports, some use of extrapolation.
C	Extrapolation from limited sample for which Grade A or B data is available.
D	Unconfirmed verbal reports, cursory inspections or analysis.

Accuracy band	Accuracy to or within +/-	But outside +/-
1	1%	-
2	5%	1%
3	10%	5%
4	25%	10%
5	50%	25%
6	100%	50%
X	Accuracy outside +/- 100 %, small numbers or otherwise incompatible (see table below)	

Certain reliability and accuracy band combinations are considered to be incompatible, and these are blocked out in the table below.

Compatible confidence grades				
Accuracy band	Reliability band			
	A	B	C	D
1	A1			
2	A2	B2	C2	
3	A3	B3	C3	D3
4	A4	B4	C4	D4
5			C5	D5
6				D6
X	AX	BX	CX	DX