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Dear John

December freeze-thaw

I write in response to your letter of 16 January regarding our preparations for and response to the December freeze thaw.

Whilst clearly a significant weather event, and one that heavily impacted many parts of the sector and the customers they serve, our operation once again remained resilient and the resultant customer impact minimal. By virtue of this, I have kept our response comparatively high level, recognizing that this will not be the case for many of the respondents to your letter.

I set out below a summary on each of the points you raise in your letter.

Impact of the freeze-thaw
The precursors to and impacts of the freeze-thaw in December were very similar to those experienced in the 2018 'beast from the east' event. Comparative data from 2018 is provided in brackets for your information.

Our operating region was subject to 12 (nine) consecutive nights of sub-zero temperatures averaging -5oC (-4oC) ranging between -2oC (-1oC) and -7oC (-10oC) between 7 and 18 December. Subsequent daytime temperatures averaged 3.5oC (2oC) and ranged between 0oC (0oC) and 11oC (5oC). When the thaw occurred on 19 December, daytime and night-time temperatures were broadly similar, averaging 12oC (5oC)

Distribution input, leakage and mains bursts all increased over the period of the freeze-thaw, and due to the different profile in temperature changes during the event compared to 2018, these increases followed slightly different profiles too. Distribution input increases peaked at 12% (25%) above forecast, leakage peaked at 190% (80%) and mains bursts 390% (200%) above forecast. This apparent discrepancy in the comparative increases in DI and leakage is explained via the differing calculation methods: DI is a total over the 24-hour period, whereas leakage is an extrapolation of minimum flows for a short period overnight.

It is important to note that for SES Water, forecast mains bursts per day are between 0.75 and 1, dependent on the time of year. Relatively speaking, this is equal lowest in the sector.

As summarized later, we have clear data that points towards a high proportion of the increase in leakage – and hence distribution input – being due to customers leaving external taps running and large numbers of customer-side leaks developing during the period in question. The extended freezing temperatures' impact on recently re-wetted ground resulted in ground heave and general movement and is responsible for the increased number of mains bursts during this period.

As in 2018, these issues were managed efficiently and professionally. Whilst we received numerous calls regarding frozen private supplies (to which we provided advice and, in the case of vulnerable customers, targeted support), our supply network performed resiliently. During the entire event, we incurred only a single supply interruption incident lasting greater than three hours. This incident, following the burst of a distribution main, resulted in three domestic properties losing supply for a period of around three-and-a-half hours until the main was isolated and services restored.

Put into context, to meet our supply interruptions performance commitment for the year, the profiled maximum duration of interruption during the month of December was 29 seconds. Actual supply interruptions for the month of December totalled five seconds.

Our response

Aside from the key learning points derived from the 2018 event, we prepared for the December freeze-thaw in much the same way: detailed weather and operational metrics monitoring in the days running up to the eventual thaw. We followed our winter contingency plan, had executive-level oversight in the incident management team and delivered regular updates to both internal and external stakeholders throughout, inclusive of our Board of directors.

Again, similarly to 2018, we commenced targeted customer communications to both household and (via Retailers) commercial customers across our region, commencing around a week ahead of the actual thaw, and continuing afterwards in the run up to Christmas. These communications took numerous different forms, including direct emailing of customers and local stakeholders (including local resilience forums), social media posts via Twitter, Facebook and LinkedIn, and paid advertorials in both online and social media platforms.

With specific regard to business customers, in addition to the measures set out above, our teams also made direct calls to a number of key and critical installations across our region (e.g., hospitals, GP surgeries, Gatwick Airport, schools and other large users) to forewarn of the potential for disruption, and to ensure they, too, were taking the necessary pre-emptive action on their own supply networks. Our observations were that due to their nationwide coverage, retailers were being contacted by multiple water wholesalers regarding preparation for freeze-thaw impacts, and that this possibly led to subtly differing advice being received by the retailers. We believe this is an issue that could be further improved at a sector level in future.

Differently to 2018, the thaw took place on a workday (19 December) and as such, we believe businesses were fundamentally in a better position to respond to any problems on their supply networks quicker than some had four years ago.

Mutual aid was offered on two occasions – in the form of our emergency road tankers – but not taken up by the requestors. Bottled water was provided to around 20 customers suffering from frozen supply pipes and who had been identified as vulnerable.

The biggest single differentiator for us in the December event compared to its 2018 equivalent was the availability of our intelligent network – iDMA. Commissioned across our entire operation in April last year, this system comprises field-based loggers measuring a combination of pressure, flow, and temperature in every one of our ~300 DMAs and an AI overlay that amongst a range of capabilities alerts us to network anomalies in near real-time. During the event, alerts generated by iDMA facilitated early identification, triage and hence optimization of our response to network-

based issues. In short, it accelerated our ability to resolve issues before customers were impacted.

Additionally, iDMA has allowed us to better understand the extent to which increases in distribution input were driven by leakage on our network as opposed to that on customers' supplies and, during the freeze part of the freeze-thaw event, due to customers running external taps to prevent damage to exposed pipework. Evident in the discrepancy between peak DI and peak leakage described above, we are confident in saying that the vast majority of increased leakage was due to customers' supply pipes or as a result of customers running taps to prevent their exposed pipework from freezing.

Compensation for customers

Our level of service provision did not trigger any GSS-related payments as a result of the freeze-thaw. Equally, we do not believe any goodwill compensation is necessary, and have to-date, made no payments under such an arrangement. This status, however, will be kept under review and if it is latterly identified that either a GSS payment is mandated or goodwill payment justified, we will duly do so.

Lessons learnt and required changes

As with the 2018 event, we have already conducted a wash-up and lessons learnt workshop to ensure we identify and address the key points identified by the teams and key stakeholders in terms of our preparation and response to the event. For us, the key learnings this time round are comparatively low-level and do not necessarily justify setting out in detail here.

I can confirm that where applicable, the key lessons from the 2018 event have been applied to our processes at SES Water (as we set out in our response to Ofwat in summer 2018.

Furthermore, we believe that the ongoing development of our iDMA and DMA asset health initiatives can and will (for the reasons given above) provide increased and significant benefit in the preparation, response and learnings for such incidents in the future.

I hope in reading this response you are comforted that SES Water has once again delivered the level of service expected by our customers in the run up to, during and after the December freeze-thaw, as we have done in repeated cases of this weather pattern in recent years and notably during the 2018 freeze-thaw.

This said, we continue to strive to ensure that at least this level of response is maintained in future scenarios and make the necessary improvements to further mitigate the risk of, prepare and respond to freeze-thaw events as-and-when they occur.

I trust this provides you with the detail and assurance you are seeking.

Yours sincerely

[redacted]

Ian Cain
Chief Executive Officer

ses WATER