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OFFICIAL - SENSITIVE

28 February 2023

Dear John,

Re: December Freeze-Thaw

Thank you for your letter dated 16 January 2023. Please find below the Hafren Dyfrdwy response to the points raised.

Executive Summary

While the event in December was similar in scale and magnitude to the 2018 event, we were well prepared given the improvements we've made; such as network upgrades, improved pressure management, insourced capability in Powys, incident management plus continuous supplies support from Severn Trent.

The freeze-thaw event in 2018 was a significant event for the sector and whilst we were not, at that time, established in our current form we have worked hard to learn the lessons from others in the sector, especially our parent company. Accordingly, we have used the opportunity to address network vulnerabilities and improve our operation.

In practice, the test on our resilience has been much greater than might seem from the recent freeze-thaw in isolation, because it came off-the-back-of an extremely dry and record-breaking summer. Nevertheless, our improved resilience and capability meant that the impact from the three supply interruptions of over 3-hours was kept to 89 properties. At the same time, our small size does mean that we see a noticeable impact from this on our supply interruptions performance for the year – an extra 23.19 seconds.

During the event, we proactively managed contact with our customers, supplied bottled water to the 48 customers who were without water for longest and communicated regular updates to customers who provided mobile numbers. We also received a total of 6 no-supply calls and, reassuringly, no complaints. Even so, we recognise that any service interruption is disappointing, especially for the customer involved. This is why we continue to review all such events so that we can put-in-place improvement and actions to mitigate the risk of a repeat issue for these properties.

Response to Ofwat specific questions:

- a) Details of the impact of the freeze thaw in your company area, including: underlying causes of any impacts; number of properties and customers experiencing problems; length of time to resolve outages; etc:

Prior to December 2022 we experienced significant ground movement caused by the long, dry summer, which saw record breaking temperatures across the whole of the UK, during the summer of 2022 burst main volumes were on average 10 a week. The freeze thaw event resulted in 83 burst mains over a 19-day period (chart 1), compared to an expected 25 – 32 for this time of year. As leakage rose by 172% (chart 2) we saw demand increase by 28% from 53mld to 68 Mld.

Chart 1: Burst main volumes December 2022

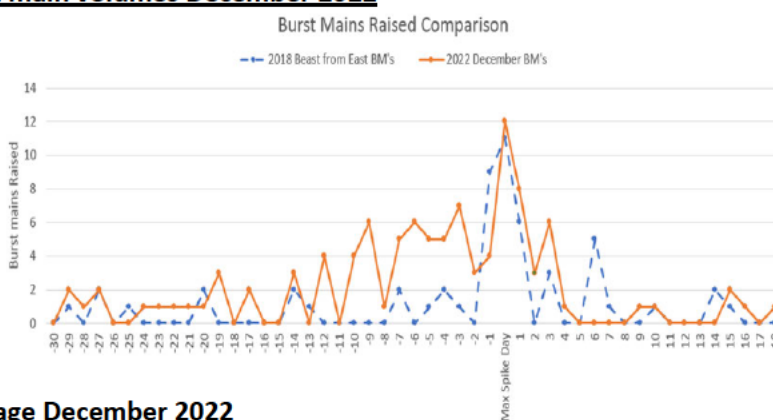
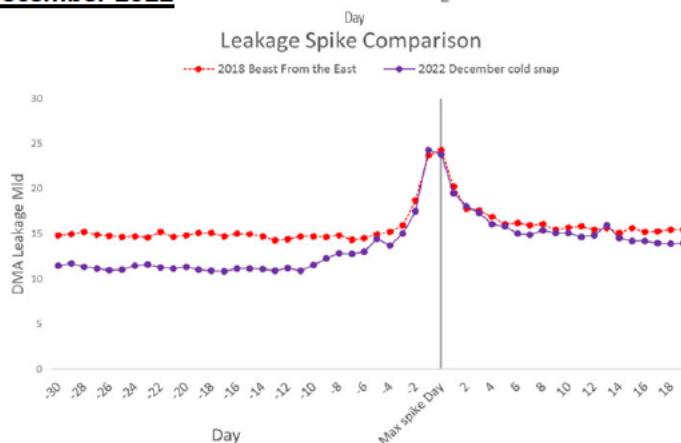


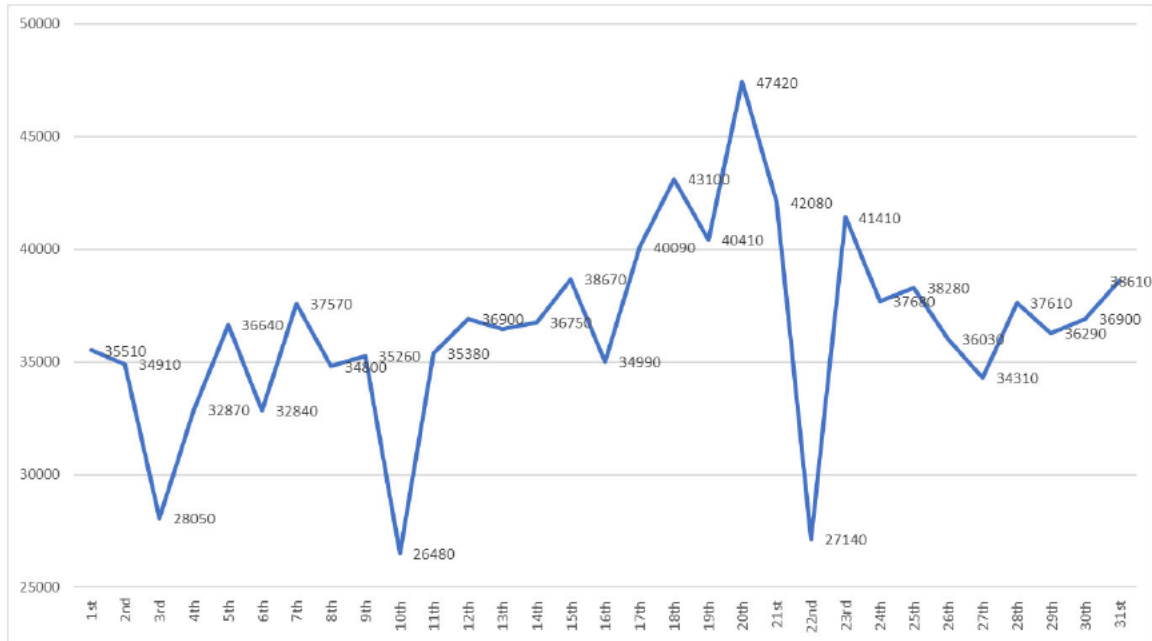
Chart 2: Leakage December 2022



With temperatures across our region having been at or around zero degrees Celsius from early December, we were monitoring the weather carefully and identified that a rapid temperature rise was forecast from the weekend of the 17 and 18 December. So, we ramped up our preparation – increasing storage across our network, ensuring asset and resource availability, and getting incident response in place. This helped make sure that average storage levels were good during the incident.

The chart below shows production and supply into the Wrexham area increasing in the run-up to and during the incident. We did this by enacting our risk-assessed ramp-up plans, ensuring critical spares were available, doubling-up standby resources and regular incident calls to review the production-demand balance.

Chart 3: Wrexham Production December 2022



While reservoir storage and water treatment works output remained good throughout, the supply interruptions challenge came from the high number and widespread nature of burst mains. We saw seven of these, of which three lasted for more than 3 hours (with 89 properties impacted) with one continuing for more than 12 hours (effecting 42 properties).

Table 1: Supply interruption events December 22 (all events 17th to 24th December 2022)

Supply interruption duration	3-6 hrs	6-12 hrs	>12hrs
Total number of Impacted properties		47	42

b) A full and candid explanation of your company's response to any impacts, including: communications with customer; mutual aid with other companies; distributions of bottled water; and identification of vulnerable customers and the support provided for them:

Preparations for the December Incident

Since the formation of HD we have utilised the industry lessons learnt from 2018 Beast from the East to ensure we are prepared and respond effectively to extreme weather events. Our work to prepare for the December event has two main components the improvement work we have undertaken since forming HD in July 2018 and the immediate actions we took in the run up the forecasted freeze thaw.

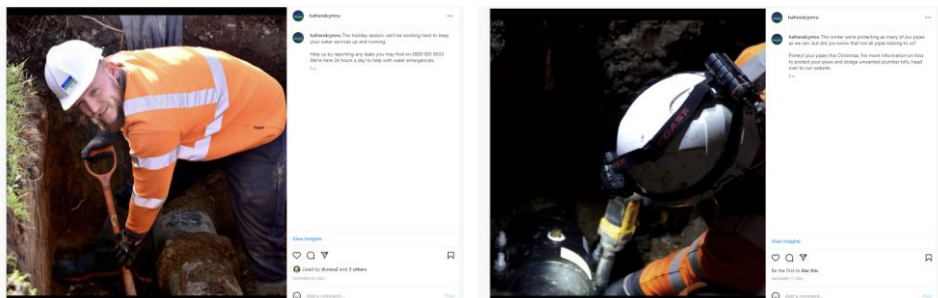
Improvement work (this has also been informed by summer events over the past four years):

- Improved forecasting and early preventative action, particularly for DSR levels
- Structured incident management response, including resourcing to respond to increased reactive issues.

- Access to the Severn Trent Network Response Team kit and resources including tankers, pump and over landing equipment in accordance with established agreements.
- Separated and insourced the Powys operational teams from Severn Trent, ensuring HD customers are prioritised appropriately.
- Continual asset improvements, including improved pressure monitoring and management of the Wrexham ring main.

Actions undertaken in the two weeks running up to the freeze thaw:

- Declared silver event on 6th December.
- Escalated to Tactical event on 16th including calls four times a day to review position, forecasts, and any open events.
- Ensured good level of resourcing, including 2nd call for standby teams.
- Increased production capability
- Prioritise leakage fix and find in the network to minimise water losses in the event of increased burst mains.
- Proactive review of critical water treatment assets and spares.
- Worked with Severn Trent Water to ensure maximum availability of Network Response Team tankers and drivers.
- Proactive customer messages through various platforms to warn of impact of the temperature change and advice on how to manage. Some examples of this:



Detailed response

In the Freeze Thaw period HD had 3 supply outages over 3 hours, these are detailed below.

- **17/12/22 Llwyneinion**
 - 39 properties were off supply for up to 10 hours following a 3 inch burst main.
 - 6 customers contacted us with no supply reports.
 - Bottled water was sent to all 39 customers.
 - During the 10-hour event we sent each customer 5 SMS / voice messages where we have customer details. The website was regularly updated.
- **17/12/22 Llangollen**
 - 42 properties were off supply for up to 12 hours and 45 minutes following a 4-inch burst main. No customers contacted us.
 - Bottled Water was sent to 9 vulnerable customers.
 - During the 12 hours we sent each customer 2 SMS / voice messages where we have customer details. Website updated.

- **18/12/22 Erddig Grounds**

- 8 properties were off for 8 hours and 13 minutes following a 4 inch burst main in a location close to a river course that require pollution management.
- No customers contacted us.
- During the 8-hour event we sent 3 SMS/ voice messaged where we have customer details. Website updated.

There was no requirement for bottled water stations and we received no customer complaints for any of these events.

c) Arrangements for compensation to impacted customers:

For our customers who were without supply for over 12 hours, we make GSS compensation payments. Our policy is to pay £30 and for these three freeze thaw events it was paid within the agreed 20 working days.

d) Lessons learned from this experience and changes you intend to implement; and whether lessons learned from 2018 freeze-thaw and recommendations from Ofwat's Out In The Cold review have been implemented.

We feel confident we have learnt from the sector lessons of 2018 and embedded the necessary improvements. It's also worth drawing out that our learnings from all events, not just winter ones, informs our approach to preparedness and underlines the importance of data analysis to foresee issues. We consider that our management of the production and supply of water demonstrates that these improvements have been successful.

Notwithstanding this, we are disappointed that 89 customers were experienced service failure and we will use the lessons captured from reviewing these events to inform our future action plans. Specifically:

- Response times were good and there was enough resource, but in all 3 incidents over 3 hours the repair was extended and we are scrutinising these incidents to understand how we can improve repair times.
- Increase the range of customers contact details, particularly to increase the proportion of customers that have shared their mobile numbers with us, with a campaign as part of our broader customer engagement plans.
- Continue to proactively engage with our customers on supply pipes to reduce private supply and leakage issues.

e) Details of your own independent review and expectation that the findings of this review will be shared with Ofwat.

We are fully committed to learning and improving as best we can. In practice, this means looking to others as well as ourselves to help develop these opportunities.

We are comfortable we have enough next steps and ideas from our internal review of this freeze thaw event so that we continue to improve and better our performance for our customers.

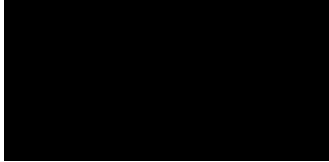
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We will also make sure to refine our actions plans following feedback from this report and any wider recommendations from the review of other water companies performance.

Yours sincerely,



James Jesic
Managing Director