

December 2024 Loss of supply incident



Investigation report – January 2025

Water outage time

DECEMBER

17

TUESDAY

AM	Testwood Water Supply Works shut down for a range of planned improvement works.
4.41pm	Work completed. Site restart attempted. Turbidity (cloudiness) in the water meant site restart failed.
PM	Site restart attempted two more times.
9.30pm	Incident team set up. 55k properties at risk of low pressure or loss of supply.

DECEMBER

18

WEDNESDAY

3.39am	5,049 impacted customers initially identified on our Priority Services Register (PSR). Details sent to our contractor requesting home deliveries begin as soon as possible.
4.52am	Fourth restart attempt at Testwood fails because of chlorine levels in water.
Overnight	Incident escalated to GOLD and Executive team stood up. Local Resilience Forum members notified.
8.30am	Rownhams Reservoir shut off. Low pressure and loss of supply begins for estimated maximum 55K properties.
10.32am	Total of 11,735 customers now identified on PSR list for impacted area and details sent to a second contractor requesting deliveries begin as soon as possible.
1.00pm	Bottled water station opened at Places Leisure Centre, Eastleigh.
4.00pm	Bottled water station opened at Sainsbury's, Lordshill.
11.30pm	Bottled water station at Sainsbury's Lordshill closed.

DECEMBER

19

THURSDAY

2.15am	Testwood Water Supply Works was successfully restarted.
8am	Bottled water stations open at Staplewood Football Development Centre, Asda Totton, Places Leisure Centre, Eastleigh, and Calshot Road Car Park, Calshot.

DECEMBER

20

FRIDAY

1.50am	All customer supplies fully restored.
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Key

Incident developments	Southern Water response	Customer support
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An update on the Testwood water supply incident 17–19 December 2024

We are very sorry about the loss of water supply from the Testwood Water Supply Works (WSW) in December. This was the largest water supply incident in recent history.

A thorough investigation into the incident has been carried out, as promised by CEO Lawrence Gosden in his [personal message to those impacted by the outage](#). We've worked with our teams and listened to feedback from customers and stakeholders, to complete this investigation thoroughly.

This summary gives an overview of what happened and how we're making improvements to our incident response.

What happened in the incident

On 17 December 2024, Testwood WSW was offline while scheduled work was carried out. After the work was completed, the site was started up again. However, due to high turbidity (cloudiness of the water), Testwood WSW was shut down at 4.41pm following normal procedures, as the quality of the water did not meet the required standards. Turbidity can affect the treatment of the water so it is critical that sites shut down automatically when this happens.

Despite multiple attempts, the site could not be restarted without turbidity issues and chlorine levels went below safe levels as a result of the shutdowns. When this happens, the site automatically shuts down to stop water quality being affected. As a result, we had to close

Rownhams water service reservoir. This caused a loss of water supply affecting up to approximately 54,550 properties for varying lengths of time from 8am on 18 December until 1.50am on 20 December. It was clear this was an incident that would stretch our capability to respond.

Our response to the incident

To ensure essential services had enough supplies of water, especially for hospitals in Southampton city centre, we sent 23 water tankers into the region in support of key sites.

Due to an ongoing water outage for a neighbouring water company, our contractor was unable to provide us with water quickly enough on the first day. This caused subsequent problems opening and stocking our bottled water stations. We brought in alternative supplies from across the UK and opened a total of four bottled water stations, while supporting community hubs and delivering to vulnerable customers; however, it's clear this was not adequate for the number of households and businesses without water.

Supplies were fully restored during Thursday 19 December.

Key fact

3,181,425 litres of water were injected by tankers into the network at vulnerable sites.

Area affected:



What happened – step by step

Tuesday 17 December

As planned, on Tuesday 17 December the Testwood Water Supply Works was shut down for a range of scheduled improvement works. Once upgrade work had been completed, the site was restarted at 4.41pm.

Unfortunately the restart procedure failed because of high turbidity (cloudiness) levels. We tried to restart the site a further three times, however the turbidity issue continued. We then had to get rid of the turbid water before restarting the site. During this time, the level of water supply in Rownhams reservoir was reducing because treated water wasn't being supplied as usual from Testwood WSW.

After a number of attempted restarts from the site, our incident protocol meant our incident team was mobilised, holding its first call at 9.30pm.

Overnight the incident was escalated to GOLD, our highest level. Our Executive team were alerted, and meetings were scheduled for the incident management team every two hours. On the 3.00am call, the team triggered the alternative response process, a necessary first step in preparing to provide bottled water stations and deliveries to support customers.

Wednesday 18 December

Our on-site team at Testwood continued to work through the night. However, at 4.52am the site registered low chlorine levels. This happened when we had to flush the turbidity out of the system, meaning one of our chemicals over-dosed, causing a reduction in chlorine. This is a critical issue as water below acceptable chlorine levels must not leave the supply works, and triggers a site shut down whenever this happens. We are still investigating the cause, and have put measures in place to turn the dosing off during site shut down.

We informed the Local Resilience Forum (LRF) – which includes Local Authority and Emergency Services teams – about the situation at 9.41am as we continued to mobilise alternative response plans.

The bottled water contractor did not have enough vehicles to transport the water; their own vehicles were already supporting an event at a neighbouring water company and subcontractor haulage companies were unable to support as they were conducting Christmas deliveries so they had no spare capacity. The bottled water station at Places Leisure Centre in Eastleigh opened at 1.00pm; however it was quickly overwhelmed by the demand and closed at 3pm when the initial stocks ran out. It opened again with new stock at 4.30pm, closing at 9.00pm when stock ran out. New supplies were procured from other water companies as well as from our contractor. A further three bottled water stations opened across the region on Wednesday 18 December and supplies were also available at community hubs run by the local authorities.

A total of 23 tankers delivered water to hospitals in Southampton and other critical locations, and deliveries

to customers listed on the Priority Service Register (PSR) began. In any incident the PSR list tends to be highly dynamic and evolves as NHS and local authority lists are merged with our own, and as customers make contact to identify their household as vulnerable so as to be added to the list. In total, 13,838 deliveries were made on this day; however there was a lack of accurate, reliable information confirming the deliveries that had been made to PSR customers; and the volume of deliveries made was insufficient.

By 8.30am Rownhams Reservoir was closed. From this point, customers started to experience loss of supply or low pressure.

At Testwood WSW our teams constructed a temporary means of draining all water from the works so it could be fully restarted. This site does not have an option to drain all water 'out to waste', and so the process had to be managed using tankers and temporary pipelines. Work on this continued throughout Wednesday.

Thursday 19 December

In the early hours of Thursday morning, our teams successfully restarted the Testwood site. They had first drained the tanks with low chlorine and then filled them back up, which takes some time. Then we started refilling Rownhams reservoir, ready to begin restoring supply to homes and businesses across the impacted area.

It was important to carry out this process in a controlled way, to protect against further disruption from bursts and discoloured water, and to make sure our customers understood what to expect when their supply returned.

We mobilised support from plumbing engineers, ensuring they were in the area ready to attend air locks or any issues. We also briefed our contact centre teams to help customers calling in.

Four bottled water stations remained open, with the first open from 8am and the last closing at 11.30pm.

We also added a third contractor to deliver to our PSR customers, responding to the feedback that we urgently needed to improve provision.

Friday 20 December

We communicated how sorry we were for what had been an unprecedented incident. We acknowledged the need to improve our response and publish a report into why this happened and what improvements we would make in the future.

We also immediately confirmed that although we were not required to make payments under the 'GSS' compensation scheme, as a gesture of goodwill compensation would be paid to all customers impacted. In an open **letter of apology** from our CEO, Lawrence Gosden, he made clear that compensation would be paid at a new, higher GSS rate, even though it has not yet been introduced.

Our investigation process

A comprehensive investigation has already been carried out about this incident and our response to it. We held workshops with all teams involved in the incident and our local teams at Testwood WSW, while carrying out a thorough technical investigation of the root causes of the incident.

In listening to feedback from customers and stakeholders, including local MPs and Local Authority members both during and after the incident, we have fully taken into account their feedback which relates especially to the provision of alternative water supplies.

We will be conducting a longer-term review of bottled water contingency arrangements as part of our incident management process.



Key fact

983,040 litres delivered to vulnerable customers and vulnerable locations, including care homes and hospitals.

Improving how we respond to an incident on this scale

This was the largest water supply incident in recent history.

Given the age of some of our infrastructure and the scale of upgrades and improvements required, we can't rule out incidents like this happening in the future. That's why our investigations have focused on our response and how we can improve this for incidents of scale.

In total, 5,223,201 litres of alternative water were supplied, including 2,041,776 litres as bottled water. However, we will improve the provision of alternative water for the affected communities, and in particular for vulnerable customers, on day one and we will aim to reduce delays.





While a total of four bottled water stations operated, there were numerous challenges in keeping them well stocked which was compounded by severe traffic congestion. There were some erroneous reports on social media of bottled water locations that were not open or operational, creating a poor experience for many customers.

We've identified a number of actions to make things better for customers in the future.

Challenges during this incident	Actions we're taking to improve things in future
<p>Supply chain constraints – a water supply incident in a neighbouring region meant that suitable vehicles and drivers were not available to move such large amounts of water. This slowed down our ability to open multiple bottled water stations quickly and to keep them well stocked.</p>	<ul style="list-style-type: none"> Working with our contractors to put changes in place that ensure more vehicles are available to transport the volumes of water required. Reviewing bottled water station staffing requirements – both for internal staff and external volunteers.
<p>Traffic management and seasonal factors – heavy pre-Christmas and local traffic made it difficult to move water around the region on lorries and tankers, to get it to where it was needed. We did consult with the Local Resilience Forum (LRF) and asked for traffic management support where possible.</p>	<ul style="list-style-type: none"> Reviewing the location options for bottled water stations across the region, to increase the number of pre-identified locations, and identify more suitable locations that take into account seasonal factors.
<p>Making sure all our customers who needed bottled water – including those on the Priority Services Register – could get it quickly and easily. More than 300 couriers were out delivering water; however information confirming deliveries was inadequate and unreliable, and the number of customers on our priority services list tripled during just 24 hours.</p>	<ul style="list-style-type: none"> Carrying out PSR register checks and a management review of improvements to ensure more accurate data is readily available. Working with our contractors to invest in technology to track the progress of deliveries in real time, and help our customers know when water deliveries are in their area.
<p>Communicating with all our customers and stakeholders was challenging – customers were contacted by text alerts and via our website; however some didn't know they could sign up for the text alerts. We've identified ways to improve the flow of information, which will help to update customers more quickly and effectively in a variety of ways during an incident.</p>	<ul style="list-style-type: none"> Raising awareness of how customers can sign up to text alerts for local incidents using bill inserts and social media. Making the latest information about large scale incidents more visible on our website. Improving our incident map to update it more quickly and enable more web visits. Making sure our customer service advisers have access to the PSR delivery schedule to provide better information to customers. Introducing a digital management system for stakeholder communication, so queries on water deliveries can be answered more quickly and accurately. Developing and putting in place plans for alternative response provision, including community hubs and communication to residents, until site improvements are made.

Improving Testwood Water Supply Works

Steps we're taking now, to improve operations at Testwood:

-  **Installing a 'run to waste' system in summer 2025** – this will improve the time needed to restart the site when we experience turbidity or other issues.
-  **Delivering improvements to high lift pumps** – this will make the site more resilient during works and mean it's faster to restore service if the plant has to be shut down.
-  **Refreshing our control of work processes** – by doing this we can ensure better management of risks associated with any planned activity.
-  **Enhancing water network plans** – plans will be reviewed, documenting network changes, and these plans will be briefed to the operational control team to ensure they are stood up when needed.

Investing in Testwood – our long-term commitments:

- We have in place a detailed improvement strategy, focusing on upgrading our largest and most critical water supply sites, including Testwood, that has been agreed with our regulators. These improvements are prioritised for delivery.
- Following a £41 million initial investment to stabilise existing assets and upgrade site resilience, we're investing another £160 million to upgrade and replace assets across the site.
- This work will make sure that Testwood Water Supply Works, which supplies over 250,000 customers, can operate effectively and efficiently well into the future, providing customers with high-quality drinking water. The work began in 2023 and will be complete by 2030.



“We're going to invest a quarter of a billion pounds on improving the Testwood site for our customers. The money will be spent on modern equipment, making Testwood efficient and resilient – far less prone to failure.”

*Lawrence Gosden
CEO, Southern Water*