Factsheet **Eight**

Using new technology to find and fix more leaks

The South East is water stressed and we're facing an increased risk of drought and hosepipe bans because of the impacts of population growth and climate change.

While we look at new ways to capture and treat water, we must also work together to save every drop of water, which is why we're exploring new technology to find and fix more leaks on our network than ever before.

What is leakage?

Leakage is water that we can't account for. It's gone into supply but hasn't reached your homes and businesses or been used by us.

Leaks happen for lots of reasons, whether from old pipes, changes in pressure on the network or damage from ground movement. More leaks happen during very dry or freezing weather as the ground expands and contracts around the pipes.

How do we measure it?

Rather than measuring the actual amount of water lost, which would be impossible, we work out the total amount lost. We add up all the water put into supply – around 566 million litres a day – and subtract the water used or lost through leaks on customers' pipes.

Water meters help, as 89% of our customers now have a meter, we're able to get more accurate readings of customer usage.

Of course, some water is also used for activities such as firefighting, or keeping the water mains clean, but any remaining water that is unaccounted for is classed as leakage.

How much water is lost through leakage?

Our leakage target is set each year by our industry regulator, Ofwat. These targets are based on the length of pipes we're responsible for. That's a lot of pipes across our 13,919-kilometre network, 232 service reservoirs and 655 pumping stations.

If we don't meet our leakage target, we must pay a regulatory penalty.

In 2019, Ofwat changed how water companies report leakage, asking all companies to report a three-year average of leakage. This makes comparisons between companies easier, and any trends more visible. It also means that reported figures are less skewed by exceptional weather events.

▼ One of our find-and-fix teams in action.

How we find and fix leaks

We use a system called Waternet, which shows us where there might be leaks on our network through a series of sensors across our region that gather data. We also have other sensors that are listening for leaks – we call them acoustic loggers – which hear when water is escaping our network. We move these sensors, to target areas where we can see unusually high levels of water use.

Did you know?

Most of our 'listening' for leaks happens at night while you're all asleep. Our leakage teams work 24/7, 365 days a year.

You're just not investing enough in the network. What are you doing about leakage?

Since 2020, we have significantly increased our find-and-fix teams and we now have around 200 dedicated technicians working around the clock, fixing around 500 leaks a week, that's around close to 25,500 leaks a year.

We're using satellite mapping to find leaks, which allows us to cover a much larger area in shorter space of time and look for leaks deep underground or under buildings and roads.

We've also introduced an advanced pressure management scheme, which reduces excess pressure on the network reducing the risk of leaks and bursts on our network.

Why can't you just fix them all? And why does it take you so long to fix a leak?

To reach the level of zero leaks would be very difficult as some are very small and hard to detect. Often these are under roads or customers' properties so finding and fixing them can be very disruptive.

We work with lots of different agencies, including the Highways authorities, to avoid traffic disruption and clashes with other utility works. Sometimes these applications to carry out work can take up to six months. We also sometimes need to get land entry permissions to work on private land. We always aim to get visible leaks completed within 24 to 48 hours if we have permissions and access.

Did you know?

The satellites we're using to find leaks are the same ones they're using on Mars to find water.

How does our leakage performance compare to other water companies?

We report our leakage figures to our regulator, who benchmarks them against other companies in the water sector. You can see how we're performing against our peers on the **DiscoverWater** website.

What can I do to help?

If you spot a leak on the street, you can let us know straight away:

southernwater.co.uk/report-a-leak

or call us on our dedicated Leakline:

0800 820 999 or 0330 303 0368 (24/7).

We'll send out a team to investigate as soon as we can.

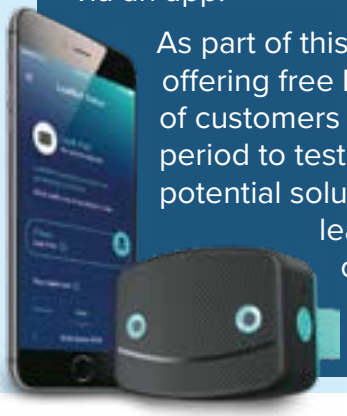
At home, leaks can be caused by dripping taps, poor connections to appliances, leaking water tanks or even your toilet. If you think you have a leak, you can check your meter reading:

southernwater.co.uk/find-a-leak

You're responsible for the pipes on your property, so if you find a leak contact a WaterSafe certified plumber: **watersafe.org.uk**.

Could robots be used to find leaks?

We're exploring the use of a new LeakBot – a small device that customers install on their supply pipe, which uses temperature changes to detect leaks. The bot can also tell customers when a tap has been left running for a long period, alerting them via an app.



As part of this trial, we'll be offering free LeakBots to a group of customers across a 12-month period to test the technology as a potential solution to customer-side leakage. We'll also be offering a further 100 of them to our employees.