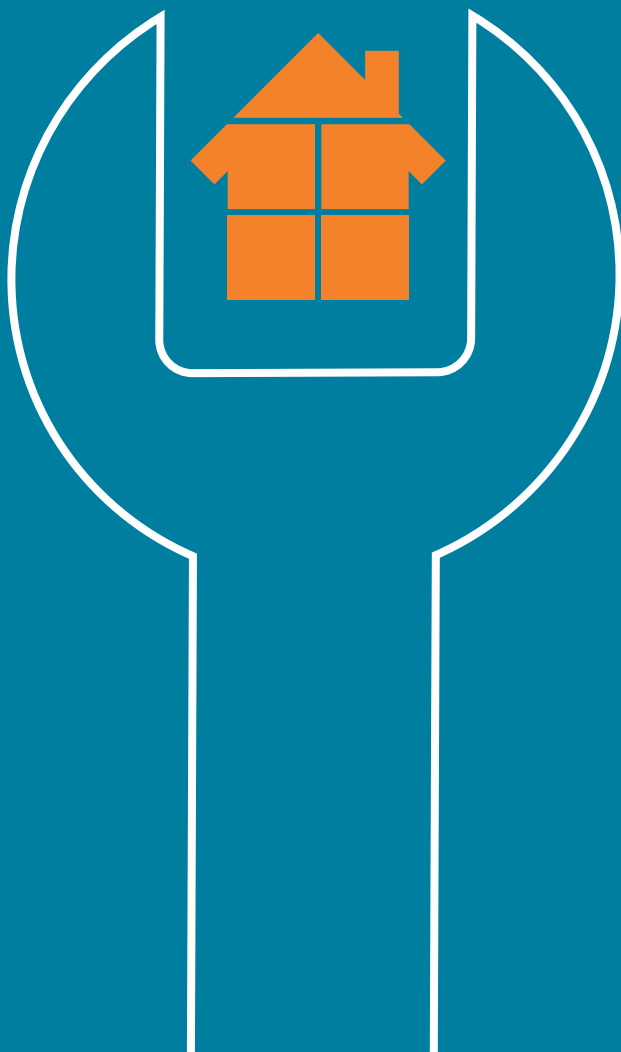


Developing homes to prevent leaks in pipes and plumbing



Water is a precious resource for our health, producing food and clothing and supporting the economy.

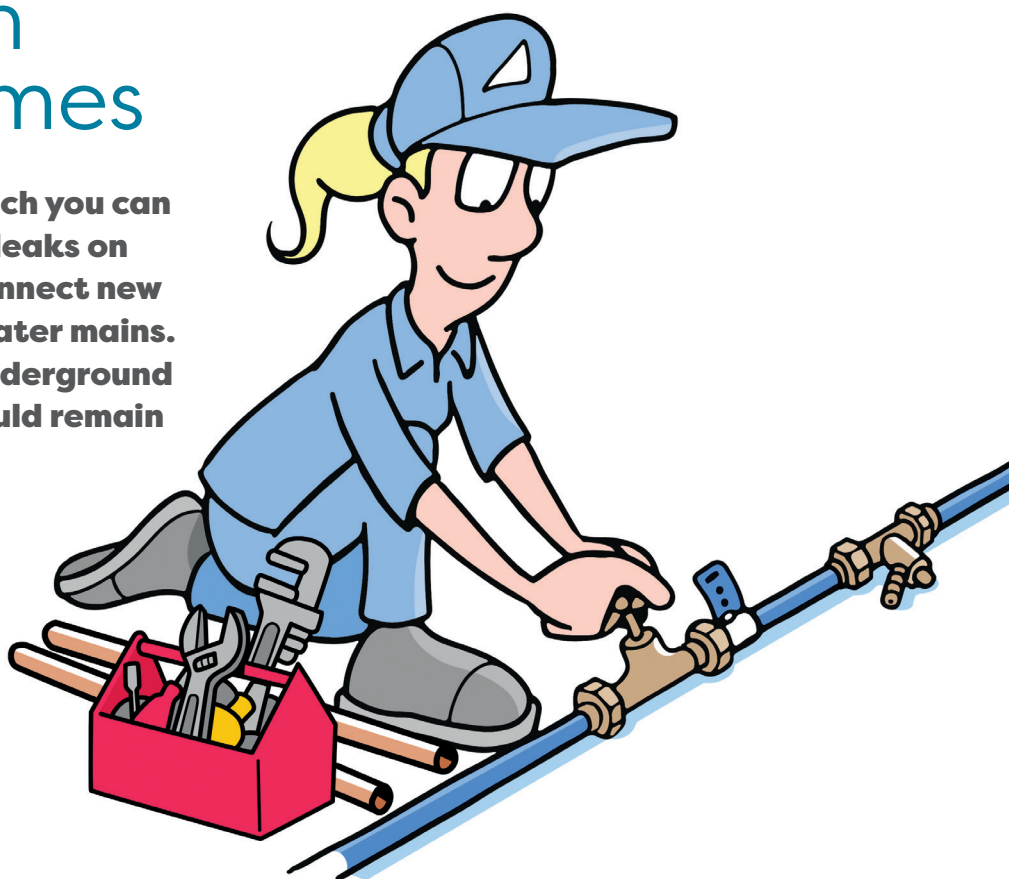
However, it's coming under growing pressure as we build more homes for more people and feel the effects of climate change and a greater risk of droughts.

About a quarter of leaks are found on the underground pipes which connect properties to water mains – so developers have an important role to play in building robust water networks to tackle these leaks.

By building watertight homes you can help keep your customers' water bills down, tackle the effects of climate change and support a healthy, flourishing environment.

A watertight connection to new homes

There are simple steps which you can take to reduce the risk of leaks on the service pipes which connect new properties to the public water mains. If installed properly, an underground water supply network should remain watertight for decades.



Water UK, which represents all the water companies in England, Wales, Scotland and Northern Ireland, has produced a Code of Practice for Self-Laying of water mains services for England and Wales. You can find it at [water.org.uk/self-lay-code-of-practice](https://www.water.org.uk/self-lay-code-of-practice).

Water UK has also collaborated with the Home Builders Federation to produce a best practice guide for installing water meters and connections in new properties. It can be found at [water.org.uk/guidance/meter-location-best-practice-guidelines](https://www.water.org.uk/guidance/meter-location-best-practice-guidelines).

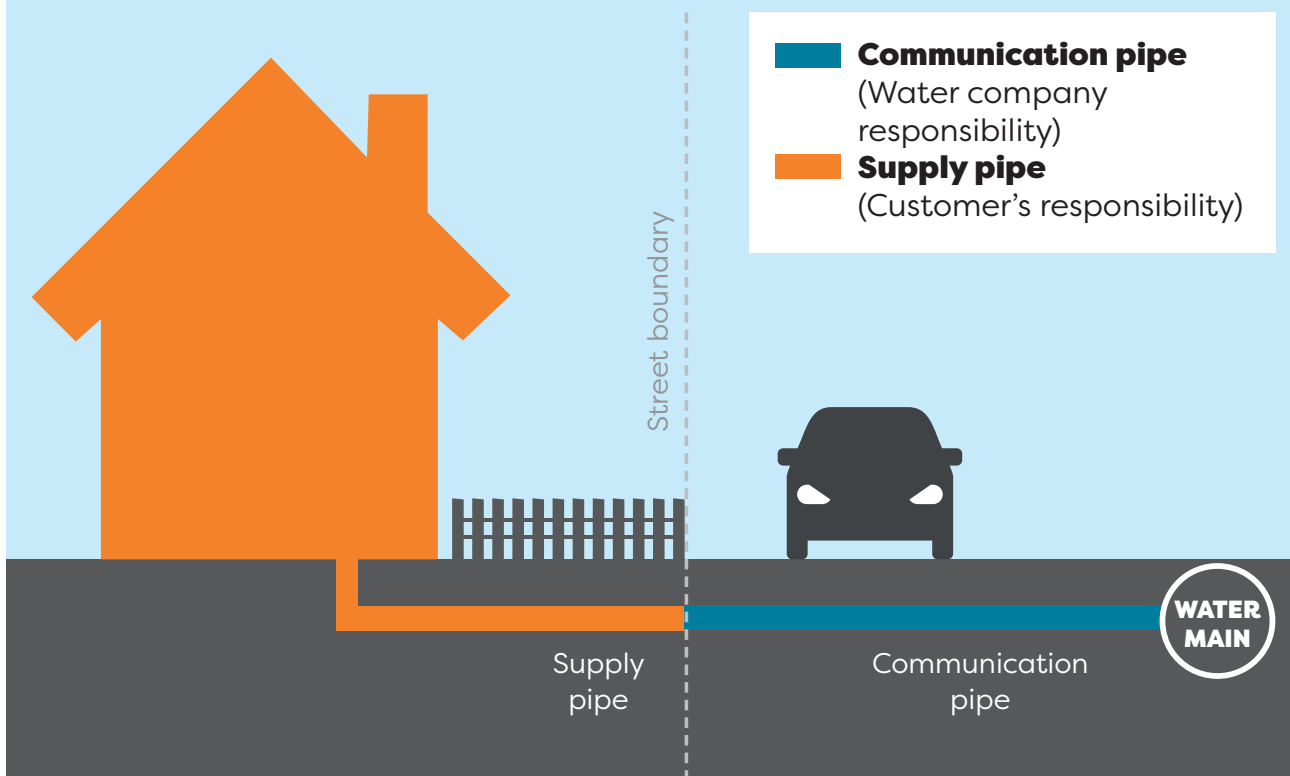
These documents include lots of advice on installing water services, some of which is important to help prevent opportunities for leaks. The guidance includes:

1. Using a continuous and uninterrupted length of pipe in a straight line to

connect the water main to the property

2. Ensuring the water pipe is installed at the correct depth – a minimum of 750mm and maximum of 1,350mm – to prevent pipework freezing
3. Only using approved fittings and materials e.g. WRAS, Kiwa, NSF
4. Designing and installing pipes to reduce the risk of leaks e.g. keeping the number of joints to a minimum and locating the stop valve above ground
5. Using approved contractors, such as WaterSafe plumbers, who will issue a compliance certificate to confirm the works are installed in compliance with the national regulations
6. Using check valves where necessary to prevent dirty water flowing back into the system and causing contamination.

Property pipes and responsibilities



Water pressure

Significant changes in water pressure can increase bursts on pipes and joints and cause leaks. If the development is likely to cause an increase in water pressure you should consult with the local water supplier or WaterSafe approved plumber about measures such as pressure reducing valves (PRVs).

Pipes

Blue medium density polyethylene (MPDE) pipe should be used for underground pipes in normal ground conditions, with a 25mm diameter. Or barrier pipe where there is a risk of ground contamination.

When a pipe enters or runs under a building it should be inside a 100mm duct, at a minimum depth of 750mm and maximum of 1,350mm below ground level. A removable seal or sealant should be used at each end and the

pipe insulated inside the duct. Joints shouldn't be used on pipe inside a duct.

Pipe trenches

Trenches containing water pipes should be backfilled with sand or soft earth. If stone, bricks or rubble are used they can 'knock' against the pipe every time there is a call for water, eventually creating a hole and leak.

The installation of supply pipes and internal plumbing is subject to the Water Supply (Water Fittings) Regulations and Scottish Byelaws. These regulations are designed to reduce the risk of contamination to drinking water and avoid the waste of water. A compliance certificate, which can only be issued by an approved contractor, will confirm an installation complies with these regulations. It also acts as a legal defence in court if the installation is deemed non-compliant.

Home and dry on the inside

Leaks can often crop up inside homes too, especially if fixtures and fittings aren't installed properly or are of poor quality.

We have also produced a leakage leaflet for you to share with new homeowners which shares advice on the tell-tale signs to look out for and how to trace and fix leaks.

By using approved contractors and approved fittings in new-builds you can be more confident about protecting your customers from dripping taps and showers, leaking loos, loose connections on washing machines or dishwashers and seeping radiators.

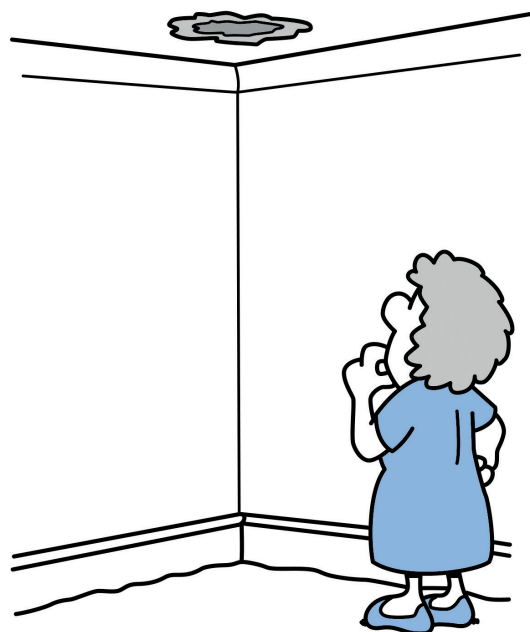
Insulating pipes and fittings in unheated places such as under floors, lofts and garages, as well as outside taps, will also help prevent bursts and leaks during cold weather.

Leaky loos

Leaking toilets are one of the most common leaks – with around 1 in 10 properties having a leaky loo. So, it's worth taking extra care to make sure the toilets you install are fit to flush.

A toilet leaking clean water from the cistern to the pan can waste up to 400 litres of water a day (five full bath tubs) and add around £300 a year to metered water bills.

Why not ask your local water supplier for toilet leak detection strips to check yours are installed correctly before handing over to the buyer.



Leak fact:

More than 200,000 customers were left without water for more than four hours and tens of thousands were cut off for days during the freezing 'Beast from the East' in the winter of 2018.



Approved plumbers and groundworkers

Using approved contractors, such as plumbers and groundworkers, who have completed suitable training, is likely to save you time and money and ensure new homeowners benefit from a reliable and healthy water supply.

WaterSafe is the UK register of approved plumbers and is supported by all the water companies and the drinking water quality regulators.

Plumbers on the register are trained in the Water Fittings Regulations – the requirements which govern the design, installation, operation and maintenance of plumbing systems, water fittings and appliances which use water.

As well as protecting water quality, the regulations also prevent ‘water waste’.

For most types of plumbing work, plumbers have a legal duty to notify the local water supplier before they start work and this can lead to delays. Approved plumbers can carry out some work without this advanced notification.

Some water companies may also provide incentives if you use an approved plumber or approved groundworker to carry out work.

A compliance certificate issued by a WaterSafe approved plumber would confirm your installation complies with the regulations and provide a defence if you are challenged by a water supplier enforcing the Water Fittings Regulations. Why not provide this certificate as part of your new homeowners pack?

Find WaterSafe plumbers at [watersafe.org.uk](https://www.watersafe.org.uk) and approved groundworkers using the Water Support Services search.

Approved plumbing fittings and materials

WaterSafe plumbers can offer advice on choosing approved plumbing products – both to avoid waste and protect water quality. You should make sure the products you use in homes have been tested against appropriate standards.

One easy way is to look for the ‘WRAS Approved logo’ on packaging. The Water Regulations Advisory Scheme (WRAS) is supported by all UK water companies and provides a directory of approved products at [wras.co.uk](https://www.wras.co.uk). Other directories include [kiwa.co.uk/waterproducts](https://www.kiwa.co.uk/waterproducts) and [nsf.org/certified-products-systems](https://www.nsf.org/certified-products-systems).



What are water companies doing?

Water companies have pledged to do their bit by investing millions to reduce leakage on their networks by 16 per cent by 2025. By 2030 they plan to triple their rate of leakage reduction and many have also set ambitious long-term targets to reduce leaks by half.

Water companies have committed to triple the rate of leak reduction by 2030 to help meet the unprecedented challenges of climate change and population growth.

Water UK Public Interest Commitment

The National Infrastructure Commission is calling for a target to halve the amount of water lost through leaks by 2050 as part of measures to avoid large numbers of households having their water supply cut off in severe droughts.



A small supply side leak can waste 200,000 litres of water a year – nearly enough to supply a family of four and adding about £450 to a bill!

Leaks during the build

When you become aware of a leak you have a duty to repair it to avoid wasting water. If you don't, your water supplier can serve a notice under section 75 of the Water Industry Act 1991 advising you to make the repair within a set time. If the leak is not fixed, they can repair it themselves and bill you for the costs. This is because water is a precious resource vital to support communities, wildlife and the economy.