

Making sure everyone has safe, great tasting drinking water

A customer guide

It's part of our
Blueprint for Yorkshire



YorkshireWater

Each day in Yorkshire we use 1.3 billion litres of fresh tap water – that’s around 550 Olympic sized swimming pools.

To maintain high quality drinking water we carry out regulatory sampling all year round and investigate any customer queries. As part of these inspections, field technicians may visit households and businesses and will always provide information and advice where possible.

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For more details on drinking water quality visit yorkshirewater.com

Maintaining safe, great tasting drinking water

What happens during a Water Quality Inspection?

One of our Field Technicians will investigate the quality of water in your house. To try and find the problem, we may need to ask you questions, inspect the plumbing inside your home, inspect your stop tap outside, look at the water supplies outside of your property and, if needed, samples might be collected.

Sometimes, after a Field Technician has inspected all of these, they may find out that the problem lies with the plumbing inside your home. Unfortunately if this is the case, we're not responsible to solve the issue and it will be down to you as the homeowner but we'll advise as much as we can.

What to expect from our visit

<p>We won't keep you long</p>  <p>Our sampling will only take between 5 and 10 minutes to carry out.</p>	<p>Locate your water</p>  <p>We collect samples from the cold tap in your kitchen. The tap will be run for a short period.</p>	<p>How much water do we use?</p>  <p>The average cost of the water has been measured at less than 4p per sampling visit.</p>	<p>Testing times</p>  <p>Samples are taken to our laboratory to be analysed. Test results can take up to 20 working days.</p>	<p>What happens next?</p>  <p>The majority of samples collected meet quality standards. For any that don't, we'll be in touch to arrange further investigations.</p>
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How we carry out our sampling

We collect samples from the cold tap in your kitchen. We will run the tap for a short amount of time to allow fresh water to be sampled.

Before taking any samples, we need to make sure there are no bacteria in the tap which could affect the result. To do this, we squirt a diluted bleach solution into the spout of the tap. The tap is then run again before more samples are taken. Don't worry, we make sure the water is run thoroughly afterwards to get rid of the solution and ensure the water is as it was before our visit.

Sometimes, the results from samples need further investigation. In this instance we will be in touch.

These are mostly due to bacteria that suggest the quality of water is not as high as it should be. They aren't always harmful but finding them in drinking water may be a sign of possible environmental contamination.

Normally there is nothing to worry about and you can carry on using your tap as you usually would. We'll then give you any advice you might need.

What to expect next

If you've reported an illness linked to stomach upset, we'll contact you by telephone the next working day after we've collected the sample and inform you of your initial test results relating to water quality.

For all water quality inspection samples, we'll provide the results in writing. Please allow us 15 working days to receive and check the results of the sample test and a further 5 working days for you to receive the letter.

Top tips for quality water

We like to make sure our water looks and tastes great, but once it has left our water pipes there's a few things you can do to help keep it perfect.

Why not try some of these helpful tips?

Look out for the WRAS logo on all plumbing materials, this means they've been approved by the Water Regulations Advisory Scheme and will minimise taste, smell and discoloration problems.

Keep kitchens and bathrooms well ventilated to prevent the build-up of moulds and stains on tiles and other surfaces which are often in contact with water.

Ensure hot water pipes aren't too close to cold water pipes to prevent cold water pipes becoming warm, which can lead to water developing a cloudy appearance due to the presence of air bubbles.

Inspect water tanks and other storage tanks regularly, checking for adequate covers, vents and ventilation to help prevent tastes, smells and slimes.

Briefly run off any water which has stood in your pipes overnight before the water is drunk (very important if your pipes are lead). Save this water for house plants or your garden.

Always use an approved plumber with a good reputation. To find an approved plumber visit: watersafe.org.uk

The taste and smell of your drinking water

We do all we can to ensure your drinking water is not only safe to drink but tastes good too. The taste and smell of water can vary depending on where it comes from, for example water that comes from rivers will taste different to water that comes from boreholes (wells).

These differences are due to different levels of dissolved minerals (such as calcium and magnesium) and gases (oxygen and carbon dioxide) and give the water a specific taste, smell and 'mouth feel'. Sometimes some of our customers notice a change in the taste or smell of their drinking water.

Chlorine tastes and smells

Why is it used?

By law we must disinfect all public water supplies. Most of the time we use chlorine based chemicals to ensure water is safe to drink and contains no organisms which could cause illness. We only add enough chlorine to disinfect, whilst minimising taste and smell.

How is it added?

Chlorine is continuously added at all of our Treatment Works which are monitored 24 hours a day at our central control room.

Why is chlorine more noticeable at certain times of the day?

The level of chlorine in water supplies can vary slightly depending on the distance the water has to travel through our pipes. Customers who live closer to the Treatment Works may notice higher levels of chlorine. At times of high demand, such as first thing in the morning and late afternoon, more people use water meaning the water travels to you more quickly and may contain more chlorine. With time, the concentration of chlorine in the water pipes reduces.

What can you do to reduce the taste?

We can't promise that your water will never taste or smell of chlorine and we know some customers are more sensitive to its taste. To minimise the taste we suggest:

- Filling a glass jug or bottle with tap water.
- Covering it.
- Leaving it in the fridge for an hour or so to chill it.
- We recommend using chilled water within 24 hours.

Chlorine-like tastes and smells

What are they?

Sometimes customers notice a distinctive taste (described as 'medicinal', 'disinfectant', 'swimming pool' or 'TCP-like') to their drinking water that's often most noticeable in boiled drinks such as tea and coffee. Chlorine is removed by boiling so these tastes are not directly due to chlorine.

Where does the taste come from?

Our experience and independent research has shown this taste is likely to be caused by rubber and plastic materials used in domestic appliances and fittings. These plastic fittings include kettle gaskets/seals, tap washers and hoses fitted to the inlet of washing machines and dishwashers. The taste doesn't come from the water pipes but is formed within properties.

These plastic and rubber materials contain 'phenols' and related substances which can cause unpleasant tastes or odours. Additionally, low levels of chlorine may react with these chemicals to produce other taste-causing substances. Although these substances can cause unpleasant tastes in hot drinks at very low levels (parts per trillion in some cases) they are not harmful to health at the levels normally detected.

What can I do to find the cause?

Kettles – if you only notice the taste in hot drinks, try boiling water in a clean saucepan. If the taste is no longer present then the likely cause is the kettle gasket that seals the elements to the side of the kettle. This is often most noticeable with new kettles.

The problem may well go away with time if the kettle is new. Boiling fresh water each time may also help to keep the taste to a minimum. Before boiling your water, try taking the steps we describe in the 'What can you do to reduce the taste' on page 7, this will help reduce the likelihood of a reaction taking place. We suggest that if the problem persists, you might like to contact the manufacturer for their advice.

Washing machines and dishwashers – 'chlorine-like' tastes can sometimes relate to the hose which transfers water from your supply pipe to dishwashers and washing machines. Increases in water pressure can result in the flexi-hose expanding like a balloon – when the pressure is released by opening a tap in your home, the hose collapses and can squirt water back into your supply pipe. This water can then mix with your incoming water.

To stop this, try shutting off the flexi-hose by turning off the valve that supplies your cold water to the appliance when it's not in use. This advice is also given by many manufacturers.

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If the location of the valve makes it difficult to access or operate easily, you might like to consider asking a plumber to do one or more of the following:

- **Move the valve to a more accessible place so that it's easier to use.**
- **Move the valve to a position after the draw-off point of the kitchen tap.**
- **Fit a non return valve (also known as a check-valve) at the start of the hose.**

We'll send you a check-valve free of charge for you to fit at the connection of the hose and your mains water supply. The check-valve prevents any water that's been in contact with the flexible hose from coming back in to your water supply (i.e. it lets water in to the machine but not out). In our experience check-valves resolve many of these type of taste complaints.

Tap washers – sometimes, the washer inside kitchen taps and stop-taps may be the cause of an unusual taste in your drinking water. This is more likely if it doesn't conform to British or equivalent European standards. The Water Regulations Advisory Scheme (WRAS) can provide advice on correct tap fittings. You can call them on **0333 207 9030**.

If there is a second mains fed tap in the house try using water from this. If no taste is noticeable then the cause is probably the tap washer in the original tap. If no other suitable tap is available then run the tap for a short time before tasting the water. It's worth noting that internal stop taps are also fitted with WRAS approved washers.

Other hoses and fittings – many modern kitchen tap fittings use flexible or braided hoses and other rubber-like materials. Some of these fittings can create taste problems. The best way to eliminate these is to ensure that all your drinking water fittings are approved by the Water Regulations Advisory Scheme (WRAS). Products that are approved should be clearly labelled.



Please be aware, although it is against the Water Fittings Regulations to install any unapproved product to your drinking water pipe it is not illegal to sell them and many unapproved plumbing products are freely available.

Why does the taste come and go?

Taste issues can come and go due to one or a combination of the following factors:

- **Changes in pressure** – the pressure of your water supply is slightly higher at night and when fewer people are using water. This increased pressure can cause a slight expansion in rubber hoses (like a long thin balloon) attached to washing machines and dishwashers. When a tap in your property is used, the pressure reduces and the expanded rubber pipe collapses and squirts water back into the incoming supply.
- **Standing water** – water left in your pipes overnight or when your property is empty is more likely to pick up any taste-causing substances from unapproved materials. Running your tap for a few minutes prior to use will solve this.

- **Washer deterioration** – Certain types of washers degrade with time. Because the 'break-up' of these washers isn't a continuous process, the taste may come and go.

Earthy/musty tastes and smells

These kinds of taste or smells can be due to the growth of harmless micro-organisms such as bacteria and fungi in domestic pipework, particularly sections that can have a low usage or are subject to local warming (when hot pipes come into contact with cold pipes). Valves and fittings containing rubber materials are also particularly prone to such growths.

If this happens, the problem can be fixed by making sure the hot and cold pipes don't touch. The sections of pipes that aren't used as often should be flushed to bring fresh water in. All materials used for plumbing should be WRAS approved wras.co.uk.

Sometimes earthy/musty taste and smells are caused by very low amounts of naturally occurring substances released by algae growing in raw water reservoirs. These substances are not normally thought to be hazardous to health at the concentrations at which they are found. Our Water Treatment Works are operated to minimise these substances and we carry out daily checks on the smell of the raw and treated water.

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Petrol/diesel tastes and smells

These one off smells can be caused by a spillage of fuel near a plastic supply pipe. Such substances can, over time, pass through the plastic pipes and result in changes to taste or smell.

We'll always investigate such reports quickly to find the exact cause and offer advice on how to resolve it.

If you notice a petrol/diesel taste or smell to your water, please call us on **0845 1 24 24 24**.

Bitter tastes and smells

A metallic or bitter taste can often be due to water standing in a metal pipe (e.g. copper) for several hours or more.

Try resolving these types of taste/smells by flushing the tap for several minutes to bring fresh water into the property. If this doesn't help please call us so we can investigate.

Water clarity

Discolouration

This is most often caused by changes in flow or pressure which can disturb iron and manganese sediments within the water mains. Discoloured water resulting from iron and manganese deposits is unlikely to cause any health issues

We know discoloured water isn't great for our customers, so if you experience short-term discoloured water and you need water for drinking or cooking, please follow our advice:

- **Run the main tap for several minutes (this will usually be your kitchen tap).**
- **Fill a jug and leave it to stand until any sediment has settled to the bottom.**
- **Pour the clean water from the top of the jug for use.**

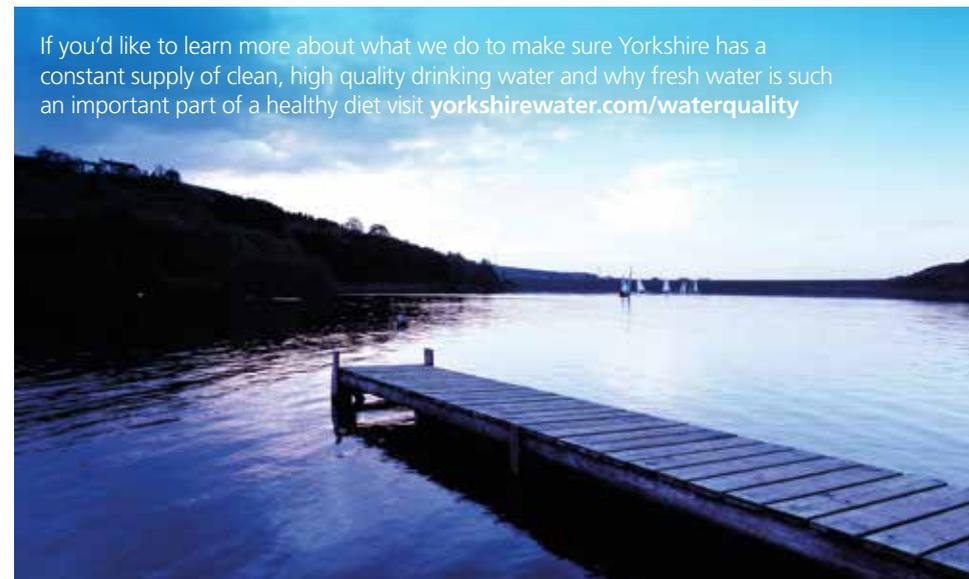
Whilst your tap water is discoloured, don't run the hot tap or use dishwashers, washing machines or any appliances fed by your hot water supply.

If your tap water is permanently discoloured, or you're concerned, please contact us and we'll investigate the problem and arrange a visit if necessary.

Cloudy or milky water

Water can appear cloudy or milky if air mixes with the supply. If water containing air is allowed to stand for a few minutes in a glass, the water will clear from the bottom of the glass upwards as the air bubbles rise to the surface. There's no risk to health associated with cloudy, milky or bubbly water.

If you'd like to learn more about what we do to make sure Yorkshire has a constant supply of clean, high quality drinking water and why fresh water is such an important part of a healthy diet visit yorkshirewater.com/waterquality



Slimes and moulds

(also known as biofilms)

What are biofilms?

The appearance of slime in and around taps, or the staining of tiles and surfaces in kitchens and bathrooms is often due to the growth of microscopic organisms such as bacteria and fungi. Collectively, these growths are called biofilms.

Bacteria and fungi are naturally present in air, food and water and can attach themselves to damp surfaces, where they can multiply to produce a visible jelly-like growth, slime or stain in various colours (black, grey and pink). Although not nice to look at, biofilms are considered to be a nuisance rather than a risk to health. It's not possible to completely and permanently remove biofilms, however, it's possible to stop them growing.

Where do biofilms occur?

Biofilms can occur on any surface that regularly comes into contact with water. They're often found in the following areas around the home:

- **On the inside of taps (especially where the tap has a mesh-style-like insert to prevent splashing).**
- **In and around washing machine powder drawers and door seals.**
- **Around the base of taps and tap fittings.**
- **In drains and plugholes.**
- **In shower heads and on shower curtains and doors.**
- **In and around toilet cisterns.**
- **On tiles around the bathroom area and kitchen sink area.**
- **In header tanks (eg: in the loft or airing cupboard).**

What can be done to reduce biofilms?

The bacteria and fungi that live in biofilms need water and nutrients to survive and grow. The best way to prevent growth is to improve ventilation so kitchen and bathrooms can dry quickly. It's also important to reduce the food sources available to biofilms. These may include shampoos, soaps and general kitchen food. Keeping the areas clean and free from potential food sources will restrict growth.

Certain plumbing materials can also promote growth of biofilms, for example rubber washers in taps and some flexible hoses connected to washing machines and dishwashers. If these are suspected to be the cause of biofilms, replace them with an approved product (you should get advice from a qualified plumbers merchant).

If any taps (where biofilm has been noticed) are fed from a header tank, it's worth investigating to check that it's clean and correctly sealed.

Biofilms attach and grow quicker on rough surfaces such as limescale. Limescale can be removed using a brush and a variety of cleaning products.

The use of water filters and softeners can also encourage biofilm growth, especially if they aren't maintained and serviced according to the manufacturers' instructions.

How can biofilms be removed?

Black slime associated with tap fittings can be removed by cleaning (both inside and outside) with a small brush (such as an old toothbrush) dipped in a mild solution of bleach. Flush the tap after cleaning to remove any bleach.

Kitchen surfaces and tiles can be wiped with a household cleaner or mild bleach solution that will kill the bacteria and fungi. It's our experience that use of a sponge rather than a scouring pad gives best results. Always remember to check that the cleaning solution you use is suitable for the surface you will be using it on.



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Hardness, Scum or Scaling

Water hardness is the measure of the concentration of calcium and magnesium salts in your water - two of the essential minerals that your body needs.

Why isn't all water the same?

Water hardness can differ across our region as it depends on the soil and rocks from where your water is taken. For example, water that has been held in chalk or limestone (known as an 'aquifer') will tend to be harder (mainly in the east of the region); on the other hand water from moorlands tends to be softer (mainly in the west of the region).

Our notable Yorkshire Grid system means that we can transport water around the region to meet supply and demand. This can mean that your water hardness is not always the same as the source may vary.

What is the scale in your kettle?

Hardness due to calcium bicarbonate is destroyed by boiling and is therefore sometimes referred to as 'temporary hardness'. Boiling changes it to insoluble carbonate, which is seen as a scale in kettles or a slight film on hot drinks. There's no need to worry though as it's completely harmless.

Hardness due to calcium and magnesium sulphates isn't affected by boiling and is sometimes referred to as 'permanent hardness'.

Dishwashers

Harmless limescale is formed when hard water is heated. Most modern dishwashers have built-in water softeners that prevent white film or spots forming on glassware and crockery. Water softening products can be added to older machines. Make sure you top up your dishwasher with salt and rinse aid when they need it. If you have a problem with your dishwasher, please check the manufacturer's instructions for how to adjust the setting of the softener to suit the water hardness.

Water softeners

We're responsible for supplying clean, wholesome water. Our customers, both domestic and industrial, may want to alter the hardness of their water. So we leave it up to you to decide whether artificial softening is the right choice.

You may choose to fit softening equipment at home. This can be done provided it's in accordance with the Water Supply (Water Fittings) Regulations 1999 (formerly known as the Water Byelaws). There are softening devices suitable for home use available from reputable companies.

You must keep an unsoftened supply for drinking purposes as the softening process adds sodium to the water.

We don't advise on whether or not a water softener can be fitted. For advice on the installation of filters, softeners and other devices please contact British Water britishwater.co.uk

Water conditioners

Water conditioners are designed to help reduce the problems of hard water by preventing hardness deposits from sticking to heating elements and pipes.

Unlike water softeners, these devices don't chemically remove the hardness from the water. Although you may benefit from the installation of water conditioners, they haven't worked everywhere and we do not recommend their use.

Removing scale from hot water taps and shower heads

Limescale can build up in taps and shower heads fed from your hot water system. Taps and shower heads can be cleaned using a descaler, available from hardware stores. Don't forget to rinse fully after using any cleaning products.

Does water hardness have any health benefit?

An adequate daily intake of calcium is essential for normal growth and health. Foods such as dairy products, beans, eggs, nuts, cauliflower and spinach contain calcium. The hardness of water has a small but beneficial effect on a healthy diet.

There is no known health risk associated with hardness and we don't investigate or collect samples for hardness. If you want detailed information about hardness in your area we can provide you with this. We don't soften water at any Water Treatment Plants.

If you need to get in touch...



Visit our website yorkshirewater.com



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PO Box 52, Bradford, BD3 7YD



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