Foreword

I am delighted to present our first annual report on water fittings. Raising the profile of water fittings regulations is essential for protecting water quality and public health.

The calendar year reported here was very busy for the water fittings team. We started using a new database for scheduling and recording our work, providing a significant improvement to our way of working.

We prepared for the start of Open Water and the impact this will have on our communication with businesses. We began a new approach to inspecting educational establishments, working closely with local authorities, with the additional aim of identifying risks posed by lead pipes.

We reviewed how we can best support organisers of temporary events and festivals in our region. And in accord with WRAS we have continued to promote the use of approved plumbers and compliance with regulatory requirements.

Our progress in 2016 is a testament to the hard work and dedication of our water fittings team. This year will bring its own challenges but also opportunities to promote good practice and the importance of the regulations in protecting water quality and public health.

I hope you find this report interesting and informative.

Richard Hargrave
Head of Compliance
In 2016 plumbing materials inside customers' properties caused the majority of our water quality sample failures.

This year the Water Regulations Advisory Scheme (WRAS) plan to report on the UK water industry’s performance measures for the enforcement of the Water Supply (Water Fittings) Regulations 1999.

Each water company will provide a summary of their enforcement activities including the number of inspections carried out.

We are committed to keeping our customers informed and are the first in the industry to produce a company specific performance report.

Protecting water quality is one of our top priorities and work begins in our catchment areas, ensuring the protection of our raw water sources from contamination. Water then undergoes appropriate treatment, including disinfection, before distribution to our customers.

Once drinking water enters premises, including customers’ homes, owners and occupiers have a duty to preserve the quality of the water. This is achieved by ensuring that plumbing systems are installed and maintained in accordance with the Water Supply (Water Fittings) Regulations 1999.

These regulations are enforced by water companies and intended to prevent the contamination, waste, misuse, undue consumption and erroneous measurement of drinking water.

We have a dedicated team of water fittings regulations inspectors who act as the enforcement officers.

This report identifies the approach our inspectors take to:
- inspections
- reporting findings
- working with customers to address any issues found.

It also emphasises the role of inspectors as enforcement officers protecting drinking water quality. They now play an important part in the lead up to and during public events in order to maintain water quality to, for example, festival visitors.

In this report we also identify future challenges and a number of collaborative projects to raise awareness of the regulations and promote ways for customers to look after water in their homes.
Our focus and position on water fittings

There can be no compromise when it comes to protecting water quality and the health of our customers. The focus of the fittings team is to ensure water quality is maintained once it enters customers' homes and all other properties we supply. Their priority is to inspect premises that pose the greatest risk to the public water supply and consumers.

Designers, builders, owners and occupiers of properties are responsible for the installation and maintenance of their plumbing system and domestic customers can contact us for advice on this. From 1 April 2017 similar advice will only be available to non-domestic customers on application through their retailer.

What pipework are you responsible for?

It is important to know which pipes you are responsible for and which we look after.

Water quality can deteriorate in several ways once it enters and travels through the plumbing systems of buildings. For instance, unsuitable materials can leach substances into drinking water, affecting its taste. Metals from pipes, such as lead, can dissolve into the water when it comes into contact with the pipe. If check valves are not properly installed water from boilers and cisterns can flow back into the drinking water supply.

It is our legal duty to inspect and report where plumbing systems do not meet the regulations and record these as contraventions of the regulations. Some have the potential to affect the health of those at the property and potentially their close neighbours.

Where required we will enforce the regulations to ensure that corrective work takes place and, once complete, re-inspect to confirm compliance.
Our objectives for the enforcement of the water fittings regulations are to:

- continue prioritising the inspection of high risk premises
- raise awareness of water fittings regulations and how they protect water quality and reduce wastage
- work with local councils targeting specific issues posing health risks
- work with customers to fix contraventions and offer advice on how they can make sure they meet the requirements of the regulations
- quickly respond to any report of water quality concerns and swiftly restore the normal high quality drinking water
- continue promoting the importance of WaterSafe membership among plumbers and the scheme among customers, encouraging their use for plumbing work
- maintain records of public events and plan to inspect well in advance to ensure water quality is protected.

Each year we aim to inspect:

- **10%** of the highest risk non-household premises
- **10%** of the highest risk household premises
- **20%** of public buildings
- **100%** of the highest risk new connections
- **100%** of water quality incidents related to plumbing
Performance 2016

We carry out inspections across a wide variety of premises and keep records of all the findings. All figures reported here are the number of premises inspected.

**High risk - non-household**

We prioritise premises that pose the highest risk to our customers because of the nature of their activities and use of water. This category includes farms and industrial sites.

**High risk - household**

There are only a few high-risk household properties within our region. These are homes with systems like rainwater harvesting, some types of solar heating and reverse osmosis systems that must not be cross connected with drinking water to avoid causing contamination. Also included are properties with a private water supply.

**Public buildings**

Our key focus in inspecting public buildings is to protect visitors and potential consumers of drinking water at these establishments. They include buildings like restaurants, hotels, educational establishments such as schools, leisure centres, and village halls.

At the end of 2015 we began a trial to increase the number of public buildings inspected, with a contractor carrying out inspections in an area of Wiltshire. This ran until early 2016 and approximately 160 inspections were completed. This provided us with an insight into the technology used by other companies and alerted us to the best approach to inspecting these types of premises and working with their owners.
Water quality concerns

In 2016 our inspectors were also required to respond to an increased number of water quality concerns. These related particularly to circumstances where customers reported strong chlorine or TCP taste and/or odours in water drawn from their cold water kitchen tap.

The most common cause of intermittent taste issues is the positioning of the flexible hose supplying washing machines and dishwashers. Water in these pipes can flow back into the drinking water where it affects the taste. The likelihood of this occurring depends on the design in each home, but fitting a check or non-return valve on the inlet hose to the appliance will prevent this from happening.

Total number of all premises types inspected

Contraventions

We record any problems with plumbing systems as contraventions of the regulations. This chart shows the number of premises at which contraventions were identified compared to the total number inspected.
Owners and occupiers planning plumbing work must consider whether it will meet the Water Supply (Water Fittings) Regulations 1999. They also have a legal duty to notify their water company about a wide range of work, including:

- building a house
- installing a swimming pool
- altering a water system on business premises.

Water companies must also be told when the material use of a building changes, for example from a house to a block of flats.

Consent for this work must be obtained from the water company before starting. However, in some cases this is not required if an approved plumber is used.

Approved plumbers are trained in how to work safely with drinking water and to make plumbing systems meet the regulations. On completion of work, compliance certificates must be sent to the water company and the person who asked for the work to be done stating that it meets the regulations.

Examples of where contraventions of the water fittings regulations can cause incidents include incorrect installation of rainwater harvesting systems. In such situations, cross connections can result in contamination of a drinking water supply.

Approved plumbers and notification of plumbing work

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WaterSafe is a national register for approved plumbing professionals maintained by WRAS. The scheme urges organisations to entrust work on their plumbing systems to qualified professionals only, reducing the risk of contamination from unsuitable materials and poor plumbing practices.
Over recent years our inspectors have increasingly attended public events, helping in the lead up to and during the events themselves.

They spend extensive periods with organisers in the planning stages to determine how the water will be supplied and then how its quality will be maintained through the temporary network of pipes and fittings used to supply the taps for the thousands of visitors.

Examples of the largest events in the Wessex Water supply region include:
- The Great Dorset Steam Fair
- WOMAD
- Camp Bestival

Our work at these festivals has been successful and there have been no water quality incidents during these events.

The Great Dorset Steam Fair

This national heritage show, regarded as the leading show of its type in the world, takes place near Blandford, in Dorset, at the end of every summer.

The site comprises more than 600 acres and the show is one of Europe’s largest events, attracting up to 200,000 visitors over the five days – 2016 was its 48th year.

An event of this size requires extensive plumbing including tanks, pumps and pipes to transfer the water around the whole showground. The supply is not only for drinking water purposes, but is also required for event traders’ stalls, shower units and animal troughs.

As the water moves around the site, all tanks, fittings and pipes must be protected from contamination and several ‘pillow’ tanks, shown on the right, are used for storage.

One of the main challenges during the summer is preventing the water from warming up. Keeping the pipework underground as much as possible helps to minimise exposure to the sun’s heat. Once these pillow tanks were installed, ultraviolet protective covers were used and proved very effective.
Looking ahead to 2017

The wholesale water supply market opens for all non-household premises and organisations in April 2017.

One of the main changes will be that we must update and send copies of all correspondence to the non-household customer’s retailer.

The non-household customer may have to contact their retailer in the first instance regarding some general water fittings enquiries. However, we will still interact and inspect in the same manner and deliver the same high quality service.

To prepare for the changes an additional full-time regulations inspector has joined the team to reflect the increased number of inspections required. An additional scheduler has also joined the department to assist with the planning of inspection work and communication with customers.

A member of the water fittings regulations team has been appointed to manage projects, focusing on improving awareness and understanding among plumbers about the requirements of the water fittings regulations.

We provide two levels of official BPEC Certification Ltd training courses, one for external services contractors or groundworkers and the other, more in-depth course, for those working on internal plumbing. Both courses involve studying a manual and meeting our trainer in person to discuss the content – followed by a test.

Successful candidates register with the Water Industry Approved Plumbers Scheme (WIAPS) and will appear on the national register of approved plumbers – WaterSafe. Membership is free and the UK water industry actively promotes the use of approved plumbers.

Customers who use approved contractors and plumbers will receive a certificate for the work carried out. A copy must also be sent to the water company if the type and scope of the work meets certain criteria.

In 2017 we will continue to promote this training and explore other options to reach more potential candidates, ensuring plumbing work is carried out in compliance with the fittings regulations.
Plumbing materials in properties are frequently the cause of failing water quality samples.

Examples include:
- lead from lead and galvanised iron pipes
- nickel from plated taps
- unpleasant tastes from improperly installed softeners and appliance hoses.

To avoid these issues that can be caused by unsuitable materials, make sure that only approved fittings are used. For a directory of approved plumbing materials visit the WRAS website www.was.co.uk/directory

Through the promotion of the water fittings regulations and provision of advice for customers on how to keep water safe in your home, we aim to reduce the impact of inappropriate plumbing materials. Visit www.wessexwater.co.uk/plumbing for advice on plumbing and diagnosing taste and odour issues.

A number of customer information videos are available on our YouTube channel with guidance to help customers diagnose taste and odour issues with their water.

We are planning an initiative in collaboration with local authorities to inspect all educational establishments for non-compliant plumbing materials, specifically lead pipes, which will prove worthwhile and effective.

In addition it will look for plumbing configurations with the potential to cause contamination and corrosion of internal plumbing. This will include all nursery, primary and secondary schools, colleges and university premises.

Many buildings used as schools and nurseries are conversions of older buildings and, depending on the property, may have some remaining lead pipework. To help the inspections, samples will be taken and tested for lead and other metals.