



TOTAL AIR & WATER HYGIENE

Company Service's Brochure

#

INTRODUCTION

Aqua Environmental Services Ltd are a committed team of professionals that offer air and water hygiene services to local and national clients. With Over 40 years' experience in this field, the drive in this company has stemmed from our vision statement and mission statement, which is the heartbeat of our company and helps towards our consistent success.

We have built an exceptional client base, which include local and national customers/sites. Some of our customers include the NHS, Education Sector, large and small restaurant & Hotel chains, global known Coffee Shops, HMP Prisons, Local authorities and many more. We have kept a continual high percentage of returning client's that return again and again.

We continue to excel in providing all our client's with a professional and top quality service to ensure that our client's premises are safe, compliant and legal.



A: Unit 4 Braziers Farm
Beach Road
St Oysth
Essex
CO16 8SB

T: 0800 433 7205
E: info@aquaes-ltd.co.uk
W: www.aquaenvironmentalservices.co.uk



Water Hygiene Services

- ✓ Legionella Risk Assessments
- ✓ Legionella Monitoring
- ✓ TMV Servicing
- ✓ Microbiological Sampling
- ✓ Cold Water Storage Tank Cleaning
- ✓ Cold Water Storage Tank Remedials & Replacements
- ✓ Calorifier Descale & Disinfection
- ✓ Chlorine Dioxide Monitoring
- ✓ Closed System Flushing, Dosing & Sampling



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Air Hygiene Services

- ✓ **Kitchen Grease Extract Cleaning**
- ✓ **Ductwork Cleaning**
- ✓ **Fire Damper Inspections**
- ✓ **Air Sampling**
- ✓ **Deposit Thickness Testing**
- ✓ **System Validation & Balancing**



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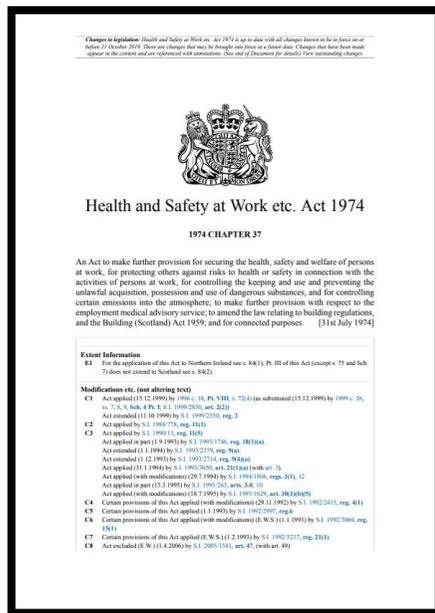
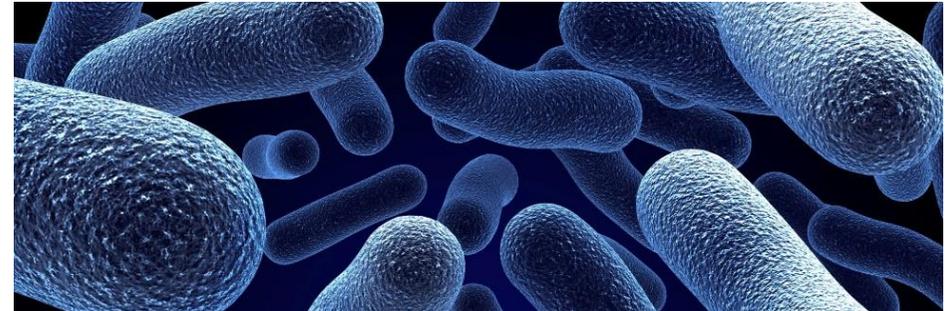
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Legionella Risk Assessments

Legionella is a risk for almost all water systems found within buildings and therefore must be adequately and effectively controlled in accordance with ACoP L8 (fourth edition 2013) under the Health & Safety at Work Act, HSG 274, CoSHH Regulations & the management of health and safety at work.

There is a legal obligation to carry out a legionella risk assessment of the associated water services in any work place or business. This includes the owners and operators of all commercial buildings including; social housing, Facilities Management, Hotels, Stadiums, Healthcare, Education, Schools, Colleges and many others, have a statutory duty to control the risk of legionella bacteria in water systems.



There is a reasonable foreseeable Legionella Risk if your water system;

- Has a water temperature between 20-45°C
- Creates and/or spreads breathable droplets e.g Showers/Taps
- Stores and/or re-circulates water
- Is likely to contain a source of food for the organism, e.g. presence of sludge, scale or fouling

Aqua Environmental Services can assist you meet your legal obligation by carrying out a Legionella Risk Assessment. All of our comprehensive reports contain the following;

- ✓ Full Comprehensive Report
- ✓ Computer Aided Schematic Drawing
- ✓ Executive Summary & Recommendations
- ✓ Monitoring Control Scheme
- ✓ Asset Register of Plant
- ✓ Insurance Recognised Certification
- ✓ Risk Rating Guidance Chart
- ✓ Glossary of Terms



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Legionella Monitoring

There is a legal responsibility under the Control of Substances Hazardous to Health (COSHH) regulations, owners & operators of all commercial premises including social housing, facilities Management, Hotels, healthcare, education and others, have a legal responsibility to control the risk of legionella bacteria in water systems.

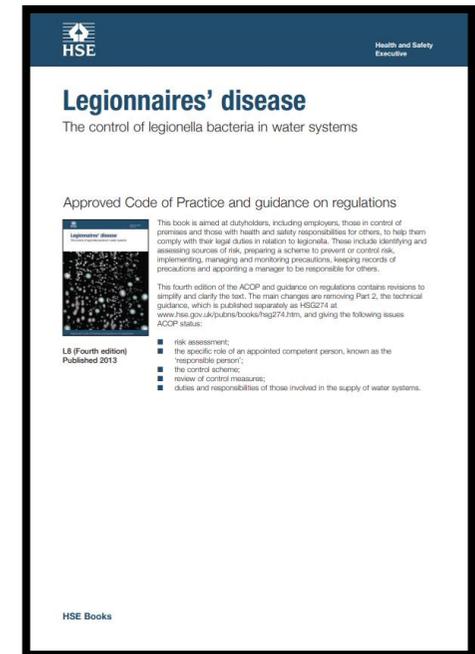
Owners and operators of all commercial properties are required to;

- 🌿 Identify and assess the sources of risk
- 🌿 Prepare a scheme for preventing or controlling the risk
- 🌿 Appoint a person to managerially responsible
- 🌿 Implement and manage precautions
- 🌿 Keep Records of the precautions implemented

Aqua Environmental Services can assist your site in carrying out monitoring tasks on the domestic water system to ensure compliance and to lower the risk of the proliferation of bacteria. An up to date Legionella Risk Assessment would ideally need to be in place to allow a more accurate plan and task matrix to be produced, which will identify the frequency of monitoring with being made aware of what asset/plant is on site.

In Addition to this, we also provide the following;

- ✓ **Free Quotations**
- ✓ **Technical Advice with our Compliance Team**
- ✓ **All works certified will Log Books Provided**
- ✓ **Training Seminars for Staff**
- ✓ **Works to be completed in accordance with LCA code of conduct as well as AOP L8 & HSG 274**
- ✓ **Fully Trained Staff**



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TMV Servicing



Aqua Environmental Services can assist sites in undertaking TMV servicing. We undertake 6 monthly and annual checks which includes the following;

- Fail Safe Operation
- Mixed Temperature
- Hot Flow Temperature
- Strainers Cleaned & Disinfected
- Cold Flow Temperature
- Adjust mixed temperature if required

A trained and competent water technician completes all TMV servicing. We shall certify the works upon completion, which includes a full comprehensive report. Any non-conformances that could be found whilst completing these works shall be noted and reported to the responsible person and owner.

Microbiological Sampling



Aqua Environmental Services can undertake an effective microbiological sampling regime on a water system to ensure that you can evidentially show results of any bacteria that may be present within a system. We use a complete **independent UKAS accredited laboratory** for all of our analysis so that we can eliminate any conflict of interest.

Some of the analysis that we can undertake are as follows;

- Legionella
- TVC
- E.Coli
- Coliforms
- Pseudomonas
- Chemical

Aqua Environmental Services receive all results and these are then issued to our client's along with any recommendations, if applicable, if any samples have returned with an out of parameter result.



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Cold Water Storage Tank Cleaning & Disinfecting



Keeping cold water storage tanks clean, will prevent sludge, sediment and scale, which provides favourable conditions for Legionella bacteria, as well as other bacteria including E. coli, to grow. It will also affect the water quality. Removing scale and biofilms is also an important tasks as bacteria can be hidden within a biofilm which forms a barrier to some disinfectants. Whether you have a small domestic type water storage tank or a large storage tank serving many areas, the fundamentals are the same, clean tanks mean clean water.

Annual inspections of the cold-water storage tanks, as stated in HSG 274 Part 2, will determine whether a clean and disinfection is required along with any other remedial action. We have built up extensive knowledge to ensure that the hygienic control for building services plant will ensure that the water systems will comply with the latest health and safety guidelines and will avoid any violation of current regulations.

Aqua Environmental Services use the latest methods of disinfection techniques and modern disinfection chemicals to ensure a high level of hygiene. The chemicals used are able to strip of biofilms which are known to harbour legionella bacteria.

Aqua Environmental Services water tank disinfection service includes the following;

- Rapid Response to site
- Works completed in accordance with relevant guidelines and Regulations
- Risk Assessment & Method Statements provided are site specific as required
- Pre & Post pictures of the works
- Recommendations on any findings
- Certification upon completion of the works



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Cold Water Storage Tank Remedials & Replacements



Aqua Environmental Services are able to undertake any sort of cold water storage tank remedial works which have been identified as non-compliant. This can be anything from installing or replacing an overflow screen or installing tank vents to replacing hollow pipes with solid struts or dismantling and installing brand new cold water storage tanks.

If a tank repair is not possible or feasible, or your preference is a cold water storage tank replacement then we can supply and install a WRAS approved cold water storage tank. We also are able to ensure continual water supply by providing temporary water systems or mains bypass, We offer different options to suit company's budgets to allow sites achieve the compliance standards that are required.



Below is an example of an epoxy painting option, if it is possible and feasible;



Cold Water Storage Tank before Prepping



Cold Water Storage Tank after Prepping



Cold Water Storage Tank with Base Coat



Cold Water Storage Tank with Top Coat & Complete



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Calorifer Descale & Disinfection

Aqua Environmental Services often deal with calorifiers where there are no records of any cylinder inspections or descaling. Some calorifer manufacturers require evidence of clean & descales to allow the warranty to be active.

While there is a great deal of emphasis on the visible surfaces of cold water storage tanks, the hot water system is often neglected, despite there being a clear guidance which is given by the HSE. Calorifiers are more difficult to access and clean than a cold water storage tank however calorifiers will often pose a higher risk for microbiological growth.

Scale is deposited as the water heats up, meaning that the calcium carbonate will form on and around the heat exchange surfaces, which if not treated then it will reduce the effectiveness of the calorifer.

Other reasons for undertaking a descale and disinfection on a calorifer are;

- The calorifer will struggle to reach 60°C
- Potential of a high bacteria count
- Warranty stays active
- A good water flow will still be achieved
- Prolongs the working life of the plant

In addition, If a calorifer doesn't have an inspection hatch, then we are able to using an acid rig that we connect onto the hot water flow and the incoming supply. This will enable us to circulate an acid based chemical through the calorifer and back into the rig to try and remove scale deposits.



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Closed Circuit Pre-Commission System Flushing



Newly installed pipework, for both heated and chilled closed systems, should be flushed of all debris that has built up during the installation process. This includes oils, dust and dirt from building work, rust and scale, all of which can be present within a newly installed system.

Ensuring your new installation has received a pre-commission system flush, will not only remove this unwanted debris, oil and grease from pipework and system parts, but will also help to ensure the longevity of your system. The use of our own, specifically designed and blended biocides and inhibitors will remove, and help to stop the build-up of rust, scale and other deposits that would naturally occur in an otherwise unflushed system.

Over the lifespan of commercial and domestic heating and cooling systems, dirt and debris accumulates within the system. This can be due to a number of factors, including internal corrosion, scale build-up and fouling from Microbes within the system. This build-up of dirt and debris can reduce the longevity of the system and will affect its overall performance, which increases fuel costs for the system as it works harder to reach its optimum temperature. This reduction in the water system's performance can, in turn, increase or even completely expunge the payback time expected from the system.

Our experience in pre-commission systems flushing and maintenance of closed heating and chilled water systems allows us to provide you with the best service and advice. Our systems engineers can not only provide initial flushing and maintenance work, but will also provide you with information and guidance to help you ensure you are getting the best performance and longevity from your water system.



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Kitchen Grease Extract Cleaning



Fire safety and cleanliness are fundamental requirements of every well-managed and maintained kitchen. These areas, if not professionally maintained can quickly become a fire risk and can be a major cause of the spread of fire within food industry establishments.

Keeping canopy hoods and filters cleaned as part of a cleaning regime is an easy task, but what about the associated ductwork & fan? Most of the time the areas involved are not easily visible or accessible to kitchen staff, the grease extract cleaning becomes easily overlooked. The kitchen grease extract system is the perfect landing place for grease, oil and other deposits in which, with very high temperatures or flames, can ignite the deposits causing fire to spread rapidly through the duct. This is why professional cleaning is of significant importance.

In addition to this, failure to ensure regular cleaning of the kitchen grease extract system can invalidate building insurance cover, there have been many cases where insurers have refused to pay out on millions of pounds worth of claims following fires where the insured has not complied with the warranties on their building insurance policies regarding regular cleaning of the kitchen grease extract systems.



Before



After



Before



After

- ✓ Full Comprehensive Report
- ✓ Pre & Post Photos
- ✓ Micron Reading Graph
- ✓ COSHH Documents
- ✓ Computer Aided Schematic
- ✓ Glossary of Terms
- ✓ Recommendations on Findings
- ✓ Insurance Recognised Certification



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Ductwork Cleaning

Virtually every non-domestic premises will have a ventilation system which will have associated ductwork within the walls/ceilings or both. Almost all ventilation systems are hidden from view in which means that the accumulation of dust debris is not apparent. This can then become a breeding ground for bacteria and mould especially if raised temperatures and humidity is also present.

To be compliant with TR/19, ventilation supply and extract ductwork must be classified at one of the three levels, according to the area of the building that it serves. Each system is classified as high, medium or low which reflects the purpose and function of that specific area of the building. From this and with help from our professional trained and experienced team, you should be able to establish which category your ventilation system falls into and therefore shall determine the frequencies of testing and cleaning.

Aqua Environmental Services specialises in tailored hygiene maintenance schedules to ensure that you achieve compliance with TR/19. To ensure compliance with the regulations and associated approved codes of practice from the health and safety commission, which states that all mechanical ventilation systems should be regular and properly cleaned, tested and maintained to ensure that they are kept clean and free from anything which may contaminate the air.



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System Validation & Commissioning

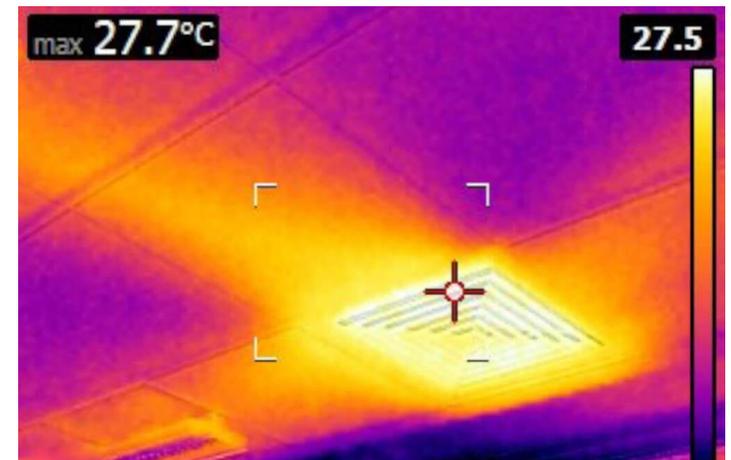


Commissioning is an important aspect and critical to every project allowing both environmental and comfort expectations to be achieved.

Aqua Environmental Services Ltd regularly carry out work on a wide range of commissioning projects, ranging from HVAC validation and commissioning to air change rates and air tightness testing. Our highly skilled and experienced team of engineers can cater to your project's needs, regardless of size, scope or the solutions needed. We can identify problems promptly and ensure that all work is completed on time, using a range of state-of-the-art testing equipment for our environmental monitoring services and air sampling services. We follow CIBSE and BSRIA codes of practice for every job we undertake and adhere to British Standards and CSA guidelines where appropriate.

We can also validate your pre-existing air and water systems in commercial and domestic buildings that have either been refitted or substantially altered. We do this by compiling detailed test documentation against actual performance readings and are able to provide commission ability guidance and recommendations on possible adjustments in-line with your project brief.

We can also provide water chemistry and microbiological sampling services of closed LTHW (Low Temperature Hot Water), MTHW (Medium Temperature Hot Water), Condenser or Chilled Water circuits and domestic services for Legionella and portability. Ensuring your water system provides clean, safe, drinking quality water.



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Fire Damper Inspections



Have you ever thought about what might happen if a fire broke out within your building and travelled into your ventilation system? Would the fire dampers within the ductwork system stop and prevent the spread of fire within the ventilation system?

Fire dampers are a crucial fire protective products that are used within ventilation systems to prevent the spread of fire inside the ductwork through fire resistance rated walls and floors. In the event of a rise in temperature, the fire damper closes, usually activated by a thermal element that melts at temperatures that are higher than ambient temperatures but are still low enough to establish the presence of fire.

This allows the springs associated with the damper to close the blades. Fire dampers can also close following receipt of an electrical signal that is integrated with a fire alarm system. There are also detectors that are remote from the fire damper indicating that there is heat or smoke within the

occupied areas of the building or within the duct system.

Fire dampers are therefore a vitally important part of any ventilation system and need to be part of a maintenance programme to ensure that they are operating correctly. This is completed by carrying out a 'drop test'.

It is a legal requirement and a critical part of building fire safety management. It states in the BS9999 that 'arrangements should be made for all fire dampers to be tested by a competent person on completion of installation and at regular intervals not exceeding 2 years, and to be repaired or replaced immediately if found to be faulty. Spring operated fire dampers should be tested annually, and fire dampers situated in dust laden and similar atmospheres should be tested much more frequently.

- ✓ **Full Comprehensive Report**
- ✓ **Pre & Post Photos of Drop Test**
- ✓ **Asset Reference Each Fire Damper**
- ✓ **Fit Access Doors if Required**
- ✓ **Identify issues & problems and report findings**
- ✓ **Recommendations for Future Testing & Inspections**
- ✓ **Insurance Recognised Certification**



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Deposit Thickness Testing



Controlling duct deposits and monitoring their build up is essential to maintain hygiene standards and reduce fire risks in heating and ventilation systems. Aqua Environmental Services use a Duct Deposit Measuring System that has been specifically designed to meet the requirements of the DTT (Deposit Thickness Test) in HVCA's (Heating & Ventilation Contractor's Association) Guide to Good Practice, for the measurement of dust and grease deposits within ventilation systems and kitchen ducts made of ferrous metals.

By using this equipment, with the specially designed probe and duct cleaning templates, readings can be taken of the deposit thickness on a specific test area, before and after cleaning. This will enable us to provide you with a clear report outlining the findings and allows us to produce recommendations on the systems cleanliness condition.

Air Sampling

Air sampling is a method used to find out what airborne contaminants are present in your environment. Air is collected by using various methods and then, it is tested for the presence and concentration of hazardous substances and microorganisms

At Aqua Environmental Services we specialise in indoor air quality monitoring and air quality testing. Whether it is specific chemical sampling for industry, office air quality concerns or complex mould contamination issues, we can help. We utilise the latest and most advanced metering equipment available. Equipment is calibrated before use and calibration certificates are available on request. As building design and material experts we understand how buildings and air conditioning systems work and can therefore provide solutions to any problems discovered during the air quality assessment.

We breathe in approximately 8,500 litres of air per day and spend an average of 90% of our time indoors. Ensuring good air quality is essential for maintaining an optimum level of wellbeing. This is critical as respiratory illnesses are directly related to toxic air quality environments.

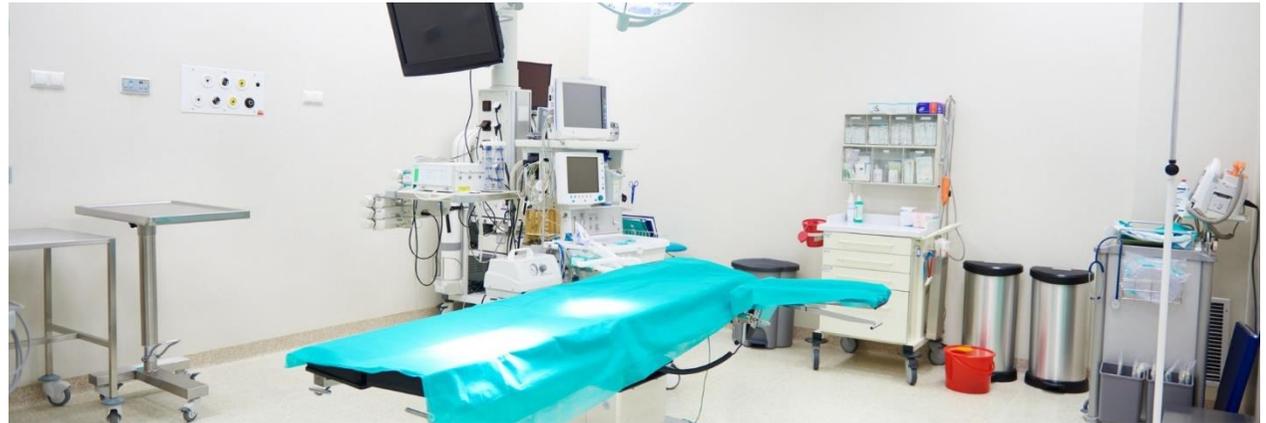


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Clinical Deep Cleans

Poor hygiene in healthcare establishments such as hospitals, dentists and GP surgeries can put people's lives at risk. Infections can spread quickly throughout these areas with devastating consequences. Healthcare environments have strict legislation surrounding the standards of hygiene solution to healthcare organisations that have urgent requests, for areas to be cleaned and disinfected rapidly. This ensures that these areas are able to function to full capacity extremely quickly whilst ensuring that a clean environment is kept.



Aqua Environmental Services use an approved chemical that is classified as a biocide under the EU Biocides Regulations. The chemical used is a high-level and sporicidal disinfectant solution designed specifically for use on large surface areas. It can be decanted into smaller containers for application on small surface areas. The chemical combines the powerful biocidal efficacy of chlorine dioxide with excellent cleaning action.

The chemical used is sporicidal, mycobactericidal, virucidal, fungicidal and bactericidal in five minutes. Chlorine dioxide has been tested in accredited laboratories worldwide and is proven effective against a wide range of microorganisms, including:

- ✓ **Adenovirus**
- ✓ **Mycobacterium Terrae (Surrogate of Mycobacterium Tuberculosis)**
- ✓ **Vancomycin-Resistant Enterococcus Faecium (VRE)**
- ✓ **Multi-Drug Resistant Acinetobacter Baumanni (MDRA)**
- ✓ **Clostridium Difficile**
- ✓ **Escherichia Coli (E. Coli)**
- ✓ **Aspergillus Brasiliensis (formally niger)**
- ✓ **Murine Norovirus (surrogate of Norovirus)**
- ✓ **Human Immunodeficiency Virus (HIV)**
- ✓ **Methicillin-Resistant Staphylococcus Aureus (MRSA)**
- ✓ **Hepatitis B Virus**
- ✓ **Hepatitis C Virus**



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Why Choose Aqua Environmental Services?

- ✓ **Professional, Reliable & Reactive Service**
- ✓ **Customer Online Portals**
- ✓ **An Engineer has on average 9 Years' experience**
- ✓ **Reliable Fleet of Vehicles**
- ✓ **Competitive Pricing**
- ✓ **Dedicated Teams & Office Staff to Liaise with**
- ✓ **A Compliance Team for you to enquire with**
- ✓ **Team Quality Control Measures in Place**
- ✓ **£10 million Insurance Cover**
- ✓ **Accreditations for our Services**
- ✓ **97.2% Returning Customers**
- ✓ **We Provide a multitude of Air & Water Hygiene Services**



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