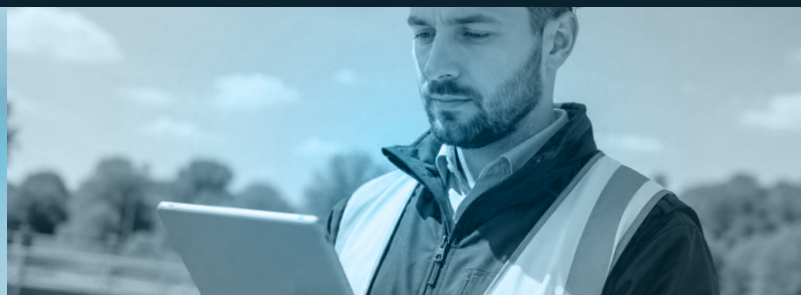
SAS WATER | Legionella Control & Water Hygiene

A guide to Legionella Risk Assessments



Understanding the Risk

Legionella is a naturally occurring bacteria found in water systems. Under certain conditions, particularly where water is stagnant, poorly circulated, or maintained within temperatures that support bacterial growth, Legionella can multiply and become a significant health risk.

The bacteria can cause Legionnaires' disease, a serious form of pneumonia contracted by inhaling fine water droplets containing the bacteria. These droplets can be released through showers, taps, cooling systems, and other water outlets. While not everyone exposed will become ill, the consequences can be severe, particularly in vulnerable individuals.

Those most at risk include:

- **People over 45 years of age.**
- **Smokers and heavy drinkers.**
- **Individuals suffering from chronic respiratory or kidney disease.**
- **People with diabetes, lung disease, or heart disease.**
- **Anyone with an impaired immune system.**

In sectors such as healthcare, industrial and manufacturing, commercial and engineering, spas, leisure centres, and large commercial and retail buildings, the risk is heightened due to the complexity and scale of water systems.

A Legionella risk assessment is the foundation of effective water hygiene management. It identifies potential hazards within a system, evaluates the level of risk, and sets out the control measures required to minimise that risk. Without a risk assessment, organisations cannot demonstrate that they are managing their water systems safely or meeting their legal obligations.

Regular assessment and review ensure that risks are not only identified but continuously monitored and controlled. This is essential in maintaining safe environments for employees, visitors, and occupants.

The Legal Framework
and Duty of Care

Legionella risk assessments are a legal requirement for any organisation that owns, manages, or controls a building with a water system. They form the foundation of compliance and provide evidence that risks have been identified, assessed, and properly controlled in line with UK health and safety law.

HEALTH SAFTEY AT WORK

At the core of this framework is the Health and Safety at Work etc. Act 1974, which places a duty on employers and those in control of premises to ensure, so far as reasonably practicable, the health and safety of employees and others who may be affected. In relation to water systems, this duty is delivered through a suitable and sufficient Legionella risk assessment supported by effective control measures.

COSHH

The Control of Substances Hazardous to Health Regulations (COSHH) further reinforces this requirement by classifying Legionella as a biological hazard. Organisations must assess the risk of exposure and implement measures to prevent or adequately control it. The Legionella risk assessment is the primary mechanism used to demonstrate compliance with COSHH requirements.

ACOP L8

The recognised technical standards used to achieve compliance are ACOP L8 (Legionnaires' disease: The control of Legionella bacteria in water systems) and HSG274. ACOP L8 sets out the legal expectation to carry out a risk assessment and maintain control of Legionella risk, while HSG274 provides detailed practical guidance on how those controls should be implemented and maintained. Together, they form the benchmark against which compliance is measured.

For businesses, this means the Legionella risk assessment is not a standalone document but the central framework that underpins all water hygiene activity. It informs monitoring schedules, maintenance routines, corrective actions, and review processes. Without it, there is no structured evidence that risks are being managed effectively.

Responsibilities linked to the risk assessment include:

- **Ensuring a suitable and sufficient Legionella risk assessment is carried out**
- **Reviewing and updating the assessment at appropriate intervals**
- **Implementing control measures identified within the assessment**
- **Maintaining accurate records to demonstrate compliance**
- **Ensuring competence through training or external specialist support**

These responsibilities typically sit with the duty holder, usually the employer, landlord, or person in control of the premises. In many cases, a competent person is also appointed to support day-to-day management of the system and ensure control measures are correctly applied.

RISK ASSESSMENTS

Risk assessments must be reviewed regularly, typically every two years, or sooner if there are changes to the water system, building use, or occupancy. This ensures that control measures remain relevant and effective over time.

HEALTHCARE

In healthcare environments, additional requirements are set out in HTM 04-01 (Health Technical Memorandum 04-01). This applies specifically to hospitals and clinical settings, where patient vulnerability increases the level of risk. HTM 04-01 builds on ACOP L8 and HSG274, requiring more stringent monitoring, tighter control measures, and more frequent review of risk assessments to ensure patient safety is maintained.

FAILURE TO MEET THE REQUIREMENTS...

Failure to meet these requirements can result in enforcement action, including improvement notices, fines, or prosecution. More importantly, it increases the risk of exposure to Legionella bacteria, which can cause serious illness.

Overall, the **legal framework makes clear that the Legionella risk assessment is the foundation of compliance**. It ensures risks are properly identified, controlled, and documented, providing both legal protection and practical assurance that water systems are being managed safely.

The Risk Assessment
Process Guide

The core steps of a Legionella risk assessment include:

01

System Identification

A detailed review of the water system, including its design, components, and usage. This helps identify areas where water may stagnate, temperatures fall within risk ranges, or conditions support bacterial growth.

02

Inspection and Data Collection

A physical inspection of tanks, pipework, outlets, and associated equipment, alongside gathering information on system usage, temperatures, and maintenance history. This stage identifies risks such as dead legs, poor insulation, infrequently used outlets, and signs of contamination or scale build-up.

03

Risk Evaluation

Assessment of where conditions may allow Legionella to grow and spread, based on system design, condition, and usage patterns.

04

Control Measures Review

Evaluation of existing controls such as temperature monitoring, flushing regimes, and cleaning schedules to determine their effectiveness.

05

Recommendations, Reporting, and Documentation

Clear, practical actions are provided to reduce or eliminate identified risks, alongside a detailed report outlining findings, risk levels, and required actions. This documentation forms the basis of ongoing water hygiene and compliance.

The risk assessment serves as a live document guiding ongoing water hygiene management and compliance. It should be regularly reviewed to ensure it remains accurate and up to date.

Spa Pools & Hot Tubs
– Additional Risk Considerations

Spa pools and hot tubs present a significantly higher Legionella risk compared to standard water systems. Warm water temperatures, typically between 30°C and 40°C, combined with aeration from jets and bubbles, create ideal conditions for bacterial growth and the production of inhalable aerosols.

Because of this increased risk, spa pools require their own specific Legionella risk assessment, separate from general building water systems. This assessment must consider not only the system design, but also user behaviour, water quality, and operational controls.

The recognised guidance for managing these systems is HSG282 (The control of Legionella and other infectious agents in spa-pool systems). This guidance is widely accepted as the standard for demonstrating compliance with health and safety legislation, particularly in commercial environments such as leisure centres, hotels, and holiday accommodation.

Unlike general water systems, HSG282 places a strong emphasis on continuous control, frequent monitoring, and strict operational procedures. The risk assessment must reflect this and define a much higher level of ongoing management.

Due to the complexity and risk level, spa pool management is highly proactive. Testing, monitoring, and intervention occur far more frequently than in standard water systems, often on a daily basis.

Failure to manage spa pools in line with HSG282 can lead to rapid bacterial growth and increased risk of outbreaks, as these systems are recognised sources of Legionnaires' disease and other infections.

For organisations operating spa pools or hot tubs, the Legionella risk assessment must clearly define these enhanced control measures and ensure they are consistently implemented. This ensures compliance, protects users, and maintains safe operation of high-risk water systems.

Key requirements outlined within HSG282 include:

01

Design and System Considerations

The risk assessment must evaluate system design, including circulation, filtration, turnover rates, prevention of dead legs, and accessibility for cleaning and maintenance.

02

Commissioning and Initial Disinfection

Systems must be properly cleaned, disinfected, and tested before use to remove contamination from manufacturing or installation processes.

03

Strict Water Quality Control

Continuous monitoring of disinfectant levels, pH, and total dissolved solids is required, often multiple times per day, to maintain safe operating conditions.

04

Routine Testing and Sampling

Regular microbiological testing is required, including monthly and quarterly sampling for bacteria such as Legionella and other organisms.

05

Cleaning and Maintenance Regimes

Spa systems require frequent cleaning, including periodic full system drain-downs, component dismantling, and deep cleaning to prevent biofilm and contamination build-up

06

User Management and Hygiene

The risk assessment must consider user behaviour, including pre-use hygiene practices, as bathers can introduce contamination into the system.

07

Documented Control Scheme and Record Keeping

A detailed written scheme of control must be in place, supported by accurate records of maintenance, testing, cleaning, and corrective actions.

Risk Assessments with SAS Water Ltd.

Managing Legionella risk assessments requires expertise, consistency, and a structured approach. Ensuring your assessments are accurate, up to date, and aligned with current guidance is essential for maintaining compliance and protecting building occupants.

SAS Water Ltd

Provides professional Legionella risk assessments, ongoing monitoring programmes, and full compliance support tailored to your organisation.

Contact us today

To discuss your requirements and ensure your water systems are fully compliant and effectively managed.

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