



vantify
CONSULTANCY

Legionella Risk Assessments

RESOURCE BROCHURE



1. Introduction

1.1 Controlling Legionella Bacteria in Water Systems

Legionnaires' disease is a potentially fatal form of pneumonia caused by inhaling airborne water droplets (aerosols) containing viable Legionella bacteria. Water systems capable of generating and dispersing aerosols can present a foreseeable risk of exposure where conditions exist that support bacterial growth.

Systems commonly associated with Legionella risk include:

- Hot and cold water systems
- Evaporative cooling systems (cooling towers and evaporative condensers)
- Adiabatic cooling systems
- Spa pools and hydrotherapy pools
- Fountains and decorative water features
- Humidification systems
- Vehicle wash systems and other specialised water systems

Whilst not exhaustive, these represent the systems most commonly associated with Legionella proliferation and transmission.

In addition to Legionnaires' disease, Legionella bacteria can cause Pontiac Fever and Lochgoilhead Fever. Collectively these conditions are known as Legionellosis.

Legionella bacteria occur naturally within freshwater environments but generally remain at insignificant concentrations in natural systems. The risk arises when water systems create conditions that promote growth and amplification, particularly where:

- Water temperatures are between 20°C and 45°C;
- Nutrients are present;
- Biofilm, scale or sediment accumulates;
- Water stagnation occurs; or
- Aerosols can be generated and dispersed.

The bacteria become dormant below 20°C and are rapidly destroyed at temperatures above 60°C.

1.2 Legal Framework

The Health and Safety Executive's Approved Code of Practice (ACOP) L8 *Legionnaires' Disease: The Control of Legionella Bacteria in Water Systems* applies wherever water is used or stored and there is a reasonably foreseeable risk that water droplets containing Legionella bacteria could be inhaled.

The principal legislation includes:

- Health and Safety at Work etc. Act 1974
- Management of Health and Safety at Work Regulations 1999
- Control of Substances Hazardous to Health Regulations 2002 (COSHH)
- Approved Code of Practice L8 (2013)
- HSG274 Technical Guidance Parts 1, 2 and 3
- BS 8580-1:2019 Water Quality – Risk Assessments for Legionella Control

1.3 Duty Holder Responsibilities

Responsibility for compliance rests with the Duty Holder.

The Duty Holder may include:

- Employers
- Property owners
- Managing agents
- Facilities management providers
- Any person exercising control over premises or water systems

To comply with their legal duties, the Duty Holder must:

- Identify and assess Legionella risks
- Prepare a written scheme for the prevention or control of risk
- Implement, manage and monitor control measures
- Appoint competent persons with clearly defined responsibilities
- Maintain appropriate records
- Review arrangements periodically and whenever significant changes occur

1.4 Competence Requirement

ACOP L8 requires that those responsible for carrying out Legionella risk assessments possess sufficient training, experience, knowledge and other qualities to enable them to undertake the role competently.

Vantify Consultancy is a member of the Legionella Control Association (LCA), recognised by the Health and Safety Executive as the principal UK accreditation body for organisations providing Legionella control services.



All Legionella Risk Assessments are undertaken by experienced consultants who are members of the Water Management Society and possess specialist knowledge of:

- Domestic hot and cold-water systems
- Cooling towers and evaporative condensers
- Adiabatic cooling systems
- Water treatment regimes
- Microbiological control measures
- Written schemes of control
- Water hygiene management systems
- HSG274 and BS8580 requirements

2. Vantify's Approach

2.1 Risk-Based Assessment Methodologies

Vantify adopts a systematic and evidence-based methodology aligned with:

- ACOP L8 (2013)
- HSG274 Parts 1, 2 and 3
- BS 8580-1:2019

Our assessments are designed not only to identify physical defects within water systems but also to evaluate the effectiveness of management arrangements and operational controls.

The assessment process typically includes:

- Review of previous risk assessments
- Review of water hygiene records
- Inspection of plant and water systems
- Verification of asset inventories
- Assessment of system design and operation
- Review of monitoring and maintenance regimes
- Evaluation of management responsibilities
- Assessment of written schemes of control
- Identification of foreseeable Legionella hazards
- Prioritised recommendations for risk reduction

2.2 Cooling Tower and Evaporative Cooling System Competence

Evaporative cooling systems are widely recognised as one of the highest-risk sources of Legionella exposure due to their ability to generate and disperse aerosols over considerable distances.

Vantify possesses the technical capability and practical experience to undertake Legionella risk assessments of:

- Cooling towers
- Evaporative condensers
- Closed-circuit coolers
- Adiabatic cooling systems
- Associated water treatment installations

These assessments evaluate both the physical condition of the installation and the effectiveness of management controls.

Typical assessment elements include:

- Review of cooling tower notifications and registrations
- Inspection of cooling tower structure and condition
- Assessment of drift eliminators
- Assessment of fill packs and distribution systems
- Inspection of basins, sumps and water treatment plant

- Review of dosing systems and bleed controls
- Review of chemical treatment regimes
- Review of microbiological monitoring results
- Review of Legionella sampling programmes
- Review of inspection, cleaning and disinfection records
- Assessment of written schemes and emergency procedures
- Evaluation of contractor performance and competence

Specific recommendations are provided to ensure compliance with ACOP L8, HSG274 Part 1 and industry best practice.

2.3 Management System Review

In addition to evaluating physical risk factors, Vantify reviews the adequacy of the client's Legionella management arrangements.

This may include a review of:

- Water hygiene policies
- Roles and responsibilities
- Duty Holder arrangements
- Responsible Person appointments
- Training records
- Written schemes of control
- Monitoring records
- Sampling programmes
- Contractor management arrangements
- Incident response procedures

This holistic approach assists Duty Holders in demonstrating effective governance as well as technical control.

2.4 Review Requirements

Risk assessments should be reviewed regularly and whenever there is reason to believe the original assessment may no longer be valid.

Examples include:

- Changes to the water system or its operation
- Changes to building occupancy or use
- Significant refurbishment works
- New information regarding risk or control measures
- Adverse monitoring or sampling results
- Changes in key personnel
- A case of Legionnaires' disease associated with the system

Review frequencies will be specified within the assessment report based on the complexity and risk profile of the system.

3. Report Format

3.1 Standards and Guidance

The assessment report will be produced in accordance with:

- ACOP L8 (2013) Legionnaires' Disease: The Control of Legionella Bacteria in Water Systems
- HSG274 Part 1: The Control of Legionella Bacteria in Evaporative Cooling Systems (2024)
- HSG274 Part 2: The Control of Legionella Bacteria in Hot and Cold Water Systems (2024)
- HSG274 Part 3: The Control of Legionella Bacteria in Other Risk Systems (2024)
- BS8580-1:2019 Water Quality – Risk Assessments for Legionella Control

3.2 Typical Report Content

The report will generally include:

- Executive Summary
- Scope of Assessment
- Property and System Details
- Legislative Compliance Review
- Assessment Methodology
- Asset Inventory Verification
- Description of Water Systems
- Survey Findings and Observations
- Risk Assessment Questions
- Assessment of Existing Control Measures
- Written Scheme Review
- Management System Review
- Cooling Tower Compliance Review (where applicable)
- Risk Ranking Matrix
- Prioritised Action Plan
- Recommended Review Period
- Supporting Photographs
- Schematic Drawings (where instructed)
- Sampling Results (where instructed)
- Summary of Immediate Actions Required

3.3 Action Prioritisation

All findings and recommendations will be risk-ranked to enable resources to be directed towards measures that achieve the greatest reduction in Legionella risk.

Recommendations will clearly identify:

- Immediate actions necessary to address significant risk
- Actions required to achieve legislative compliance
- Opportunities to improve system management and governance and
- Long-term improvements to enhance resilience and reduce ongoing operational risk

This approach provides Duty Holders with a practical roadmap for achieving and maintaining effective Legionella control across both domestic water systems and higher-risk evaporative cooling installations.

The Vantify Ecosystem



The Vantify Ecosystem spans seven connected products:

Risk Manager - Compliance and risk management software

Supply Chain - Supply chain management and contractor assurance

CAFM - Facilities and asset management with a 24/7 Service Desk

Facilities Services - Managed building maintenance delivery

eLearning - Compliance training built to change behaviour, not just tick boxes

Intelligence - Legislation tracking and regulatory guidance

Consultancy - Specialist health and safety expertise, nationwide

Compliance. **Connected.**



0203 337 3575

enquiries@vantify.com

www.vantify.com

Registered Office, 20 Grosvenor Place, London, England SW1X 7HN