
Corporate Health & Safety Manual

3.7 THE CONTROL OF LEGIONELLA IN WATER SYSTEMS

Guidance

Legal Requirements

1. The Health and Safety at Work Etc. Act 1974 <http://www.legislation.gov.uk/ukpga/1974/37> places a General Duty on every employer to ensure the health safety and welfare of their employees as far as is reasonably practicable.

The Control of Substances Hazardous to Health Regulations 2002 (COSHH) (As Amended) <http://www.legislation.gov.uk/uksi/2002/2677/contents/made> place a duty on all employers to assess and control all hazardous substances in respect of employees and other people likely to be affected by them.

The Control of Legionella Bacteria in Water Systems Approved Code of Practice (ACOP) L8 <http://www.hse.gov.uk/pubns/priced/l8.pdf> is the detailed guidance which if followed, will enable an employer to comply with the COSHH regulations so far as Legionella as a hazardous substance is concerned.

The Notification of Cooling Towers and Evaporative Condensers Regulations 1992, <http://www.legislation.gov.uk/uksi/1992/2225/made>, also place a duty on South Tyneside Council to notify the Health and Safety Executive of any Cooling Towers or Evaporative condensers.

Introduction

2. The Code of Practice L8 Legionnaires Disease (The Control of Legionella in Water Systems) came into effect on 8 January 2001 the current Fourth Edition was published in 2013 and gives guidance on compliance with regulations 6, 7, 8, 9 and 12 of Control of Substances Hazardous to Health Regulations 2002.

Definitions

3. **Legionella Bacteria** is common and can be found naturally in environmental water sources such as rivers, lakes and reservoirs, usually in low numbers. Legionella bacteria can survive under a wide variety of environmental conditions and has been found in water at temperatures between 6°C and 60°C, water temperatures in the range 20°C to 45°C seem to favour growth.

The organisms do not appear to multiply below 20°C and will not survive above 60°C. They may, however remain dormant in cool water and multiply only when water temperatures reach a suitable level. Bacteria held at 37°C has greater virulence than the same Bacteria kept at a temperature below 25°C.

Legionnaires' disease was first identified following a large outbreak of Pneumonia among people who attended an American Legion Convention in Philadelphia in 1976. A previously unrecognised bacterium was isolated from lung tissue samples, which was subsequently named Legionella Pneumophila.

Not everyone exposed will develop symptoms of the disease and those that do, do not necessarily develop the 'full blown' disease. The incubation period is between 2 – 10 days (usually 3 – 6 days). The initial symptoms of Legionnaires Disease include high fever, chills, headache and muscle pain. Patients may develop a dry cough and most suffer breathing difficulties. About one third of patients infected also develop diarrhoea or vomiting and about half become confused or delirious.

Infection with Legionella Bacteria can be fatal in approximately 12% of reported cases. This rate can be higher in a more susceptible population; for example immuno-suppressed patients or those with other underlying disease. Certain groups of people are known to be at higher risk of contracting Legionnaires Disease; for example, men appear more susceptible than women, as do those over 45 years of age, smokers, alcoholics, diabetics and those with cancer or chronic respiratory or kidney disease. It is normally contracted by inhaling Legionella Bacteria, either in tiny droplets of water (aerosols), or in droplet nuclei (the particles left after the water has evaporated) which is contaminated with Legionella, deep into the lungs.

ACHIEVING COMPLIANCE

Organisation and Responsibilities

4. South Tyneside Council recognises its duty under The Control of Substances Hazardous to Health Regulations 2002 (COSHH) and its associated Approved Code of Practice (ACOP L8) and has developed these arrangements to ensure that the risk of Legionella is managed in its own property portfolio and properties where it has an interest by agreement, i.e. where a Service Level Agreement (SLA) exists to provide a service back to a school or tenant.

To comply with COSHH and ACOP L8 South Tyneside Council will:

- Identify properties and their types where it has a duty to manage Legionella;
- Identify duty holders for their property portfolio;
- Ensure that Legionella is managed in their property portfolio;
- Make notifications to the Health and Safety Executive where applicable;
- Ensure any work where an employee could be at risk from exposure to Legionella is assessed;
- Review and audit the management of Legionella in water systems;
- Record all of the above.
- Ensure resources are available to provide competent staff to manage Legionella in Water systems.

Duty Holder (Corporate)

5. The Duty Holder (Corporate) for South Tyneside Councils property portfolio where a duty exists is the Head of Asset Management. However, this duty is delegated to the Councils

Responsible Person, the Buildings & Compliance Manager (see paragraph 6 below) and Local Duty Holders (see paragraph 7 below). The corporate duty holder has the responsibility for ensure adequate resources are available for the following:

- The effective management of Legionella in the corporate property portfolio and properties where it has an interest by agreement;
- That Initial risk assessments of Water Systems are carried out in all of the above properties and are reviewed bi-annually;
- Notification to the Health and Safety Executive of any Cooling Towers or Evaporative Condensers.
- The maintenance of a list of Local Duty Holders, their location and contact numbers.
- Ensure through the Councils Procurement Process contractor competence to carry out Water Risk Assessments and maintenance of water systems.

Buildings & Compliance Manager (Responsible Person)

6. The Buildings & Compliance Manager is located in Asset Management and has the following responsibilities:

- To provide contractors with historical information regarding installed systems in South Tyneside Council Buildings;
- To instigate initial Legionella Risk Assessments, and keep them under review
- To Notify The Health and Safety Executive of any Cooling Towers or Evaporative Condensers;
- To be a first line contact for all water management advice
- To maintain a data base of all duty holders, risk assessments and reports;
- To provide an emergency response service.
- To appoint and manage competent contractors who carry out Water Risk Assessment and maintenance of water systems

Duty Holder (Local)

7. Local Duty Holders are persons who have control of the building in which their service is located for example, the manager of a Care Home; Facilities Manager, or a Head Teacher. A local Duty Holder can also be any other person delegated by the Corporate Duty Holder. Once a Local Duty Holder has been identified/appointed it is their responsibility to:

- Provide a matrix of responsibilities and contact numbers for managing legionella in their property.
- Carry out any simple tasks e.g. running water through dead legs, flushing infrequently used toilets etc.
- Keep local records of maintenance visits.

Responsibilities of All Employees

8. Employees have a general duty under the health and safety at work etc act 1974 as follows:

- To take reasonable care for the health and safety of themselves and of other persons who may be affected by what they do or fail to do;
- To cooperate with the Council as an employer in their efforts to comply with the act;
- Not to interfere or misuse anything provide for the purposes of health, safety or welfare.

PLANNING AND IMPLIMENTATION

Building Risk Assessment

9. The basis for the management of Legionella risk in any building is an initial Risk Assessment carried out in accordance with ACOP L8 which identifies the type of water system installed in a building and whether a detailed assessment is required. The following criteria are to be used in all instances:

- Source of system supply water, e.g. whether from a mains supply or not;
- Possible sources of contamination of the supply water in the premises before it reaches the cold water storage tank, calorifier, cooling tower or any other system using water that may present a risk of exposure to legionella bacteria;
- The normal plant operating characteristics;
- Unusual, but reasonably foreseeable operating conditions, e.g. breakdown;
- Any means of disinfection in use;
- The review of any current control measures;
- The local environment.

Once this initial Risk Assessment has been completed, it will identify whether a more detailed assessment of the building's water system is required. Where the assessment demonstrates there is no reasonably foreseeable risk or that risks are insignificant and unlikely to increase, and are properly managed, no further assessment or measures are needed.

If an initial Risk Assessment identifies that a more detailed assessment is required, the Buildings & Compliance Manager will instigate the assessment from an approved contractor who is Legionella Control Association accredited.

The aim of the assessment is to identify the controls required to:

- Avoid water temperatures and conditions that favour the growth of legionella bacteria and other microorganisms;
- Avoid water stagnation which may encourage the growth of biofilm;
- Avoid the use of materials that harbour bacteria and other microorganisms, or provide nutrients for microbial growth;
- Control the release of water spray; maintaining the cleanliness of the system and water in it;

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- Use water treatment techniques;
 - Take action to ensure the correct and safe operation and maintenance of the water system.

Methods of Controlling Legionella Risk

10. Once the risk has been identified and assessed, a written scheme will be prepared to control the risk. and will identify the following:

- The physical treatment programme – e.g. using temperature control for hot and cold water systems;
- The chemical treatment programme, including a description of the manufacturer's data on effectiveness, the concentrations and contact time required;
- Health and safety information for storage, handling, use and disposal of chemicals;
- System control parameters (together with allowable tolerances); physical, chemical and biological parameters, together with measurement methods and sampling locations, test frequencies and procedures for maintaining consistency;
- Remedial measures to take in case the control limits are exceeded, including lines of communication;
- Cleaning and disinfection procedures;
- Identify specific persons to carry out the above.

Record Keeping

11. Asset Management (Property Services for STH) will maintain data for buildings within its own property portfolio and properties where it has an interest by agreement. A copy of the Risk Assessment will be issued to the Local Duty Holder and is to be retained as the Water Management Plan, it is therefore essential that it is maintained as an up to date record.

Where any works are carried out on any installed system (e.g. removal of dead legs, storage tanks), a review of the assessment will be carried out and the details of those works will be included in the Water Management Plan.

The local Duty holder will sign for the Water Management Plan and will maintain the following within it:

- A list of contacts;
- The sign over document;
- A record of service visits as identified by the Management Plan
- A copy of the risk assessment and any reviews;

Information, Instruction & Training

12. The Council will ensure that employees receive appropriate information, instruction and training to enable them to safely carry out their duties regarding water management. The responsibility for identifying training requirements lies with all Heads of Service, Senior Managers and Supervisors having control of such employees.

Monitoring

13. The Councils Corporate Health and Safety Team will monitor these arrangements, this will be achieved by carrying out site visits, the analysis of individual manager's Health and Safety Self Evaluation Submissions and planned audits.

Review

14. These arrangements will be reviewed regularly