

**GUILSBOROUGH ACADEMY**

**Control of Legionella Policy**

Policy Name	Control of Legionella
Committee	Finance Audit and Risk
Owner	Operations Manager
Statutory	No

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## **1.0 PURPOSE**

This Policy is to ensure that the risks of Legionellosis are assessed, controlled, and managed in accordance with current UK Regulations, (The Control of Legionella Bacteria in Water Systems), commonly known as the Approved Code of Practice, L8. This policy should be read in conjunction with all references within this document.

## **2.0 SCOPE**

This policy applies to all areas and installations on Guilborough site for which Site management is responsible for the delivery of water systems to the buildings. This includes residential and any other organisation residing within the site where water is used or stored, and in particular to:

Hot and Cold-Water Systems including tanks, pipework, and outlets.

- Water systems incorporating an evaporative cooling tower or evaporative condenser.
- Any other plant and systems containing water, which is likely to exceed 20° C and which may release a spray or aerosol during operation or maintenance.

## **3.0 REFERENCES**

- The control of Legionella bacteria in water systems, APPROVED CODE OF PRACTICE & GUIDANCE. L8 and references therein.
- The Notification of Cooling Towers and Evaporative Condensers Regulations (1992).
- Health and Safety at Work etc Act (1974).
- COSHH Regulations (1999).
- Management of Health and Safety at Work Regulations 1999
- The Safety Representatives and Safety Committees Regulations 1977.
- Health and Safety (Consultation with Employees) Regulations 1996.
- Written Scheme for Prevention and Control of Legionellosis

## **4.0 DEFINITIONS**

**Legionellosis** – Legionnaires' disease is a potentially fatal pneumonia caused predominantly by the Legionella pneumophila bacteria. It is the most well-known and serious form of a group of diseases known as Legionellosis. Other similar (but usually less serious) conditions include Pontiac fever and Lochgoilhead fever. Infection is caused by breathing in small droplets of water contaminated by the bacteria. The disease cannot be passed from one person to another. Everyone is potentially susceptible to infection, but some people are at higher risk e.g. those over 45 years of age, smokers and heavy drinkers, those suffering from chronic respiratory or kidney disease, and people whose immune system is impaired.

Persons exposed to Legionella can develop initial symptoms such as high fever, chills, headaches, and muscle pains. Other symptoms can include diarrhoea or vomiting and delirium. The disease can be treated effectively with antibiotics in early course. Legionella bacteria can survive under a wide variety of environmental conditions although the temperature range 20C to 45C tend to favour growth. The organisms do not readily multiply below 20C and will not survive above 60C. Legionella also requires a supply of nutrients to multiply. Sources include organisms in the water such as algae, amoebae, and other bacteria. The presence of sludge, sediment, scale and other material within systems can harbour bacteria and can provide favourable conditions and protection from biocides for bacteria to survive. It is therefore incumbent that water systems are adequately maintained and cleaned / disinfected regularly. Cfu/l stands for Colony forming unit per litre of water tested.

**Written Scheme Procedure** – A site specific technical document, which defines the control measures and procedures to maintain efficient and effective control of its water systems, for ongoing compliance with current UK Regulations, (The Control of Legionella Bacteria in Water Systems), commonly known as the Approved Code of Practice, L8.

## **5.0 RESPONSIBILITIES**

### ***5.1 Organogram***

The Organogram indicates the lines of responsibilities relating to the Management & Control of Legionella Bacteria in water systems.

This is a pictorial representation of the lines of communication between those with responsibility. This can be found in the legionella maintenance folder kept in the Operations Manager's office.

### ***5.2 Roles***

There are a number of roles which are undertaken at Guilborough Multi Trust Academy in the management of Legionella Bacteria

**Principal**- A person appointed by Guilborough Multi Academy Trust to take managerial responsibility for the overall execution of this policy and whom the statutory duty falls.

**Operations Manager, Duty Holder** - A person appointed by the Principal, to take managerial responsibility for the implementation of the policy and procedures at the Academy in accordance with L8 (Part 1 Section 39).

**Site Nominated Person** - Carry out audits, temperature testing, water flushing and to ensure all Risk Assessments are in place, completed and comply with current regulations, as cited in the current HSE L8 document, (Part 1 Section 27).

Ensure immediate action in response to out of specification results. Where required, ensure that equipment is removed from service until a satisfactory result is achieved.

Ensure that all scheduled control measures are in place and effective.

Ensure that the water systems operate under the conditions detailed in the Risk Assessment.

## **6.0 CONTROL PRINCIPLES**

### ***6.1 Design and Installation***

#### **6.1.1 Water Systems:**

All water systems shall be designed, manufactured and installed to be safe and without risks to health when used at work. Adequate documentation shall be provided to the user to ensure that the system

can be maintained and operated safely and without risk to health when used at work from Legionella in conjunction with ACOP L8.

Designers will ensure that water service systems comply with the Water Supply (Water Fittings) Regulations 1999.

Designers will ensure that general issues of design, sizing, layout, construction and commissioning of water systems comply with BS6700 and subsequently BS EN 806 when published.

Materials and fittings are acceptable for use in the water system are listed in the directory published by the Water Research Centre.

Low corrosion materials (copper, plastic, stainless steel etc) should be used where practicable.

Non-metallic materials are deemed to be compliant provided they meet with the appropriate British Standard, BS 6920: 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of water'.

Certain aspects of the system will have to comply with the Building Regulations. Water storage tanks should be fitted with covers, which comply with the Water Supply (Water Fittings) Regulations 1999 and insect screens fitted to any pipe work open to the atmosphere, e.g. the overflow pipe.

#### **6.1.2 Calorifiers:**

The storage capacity and recovery rate of calorifiers should be selected to meet the normal daily fluctuations in the hot water use without any drop in the supply temperature.

#### **6.1.3 Storage Tanks:**

Multiple linked tanks should be avoided wherever possible, if this cannot be done then equal draw off the tanks should be achieved.

All cold-water head tanks should be designed to contain a maximum supply of 24 hours usage.

#### **6.1.4 Cooling Towers:**

Cooling Tower systems should be designed and constructed to BS4485 or demonstrate that the construction of the tower is both suitable and sufficient for operation within the UK.

All equipment is designed and constructed to comply with L8 with respect to operation, cleaning and maintenance.

All cooling tower installations shall have a fully automated control and dosing system as part of the design of the system where possible.

Cooling Towers shall be subject to a water treatment programme. The treatment principles will be as defined with the Written Scheme Procedure.

All Cooling Towers and evaporative condensers shall be registered with the Local Authority in accordance with Statutory Instrument 1992 No 2225 (The Notification of Cooling Towers and evaporative Condensers Regulations 1992), Sections 1 to 4 before being connected in service.

Any modification or change to the following details of existing cooling towers or evaporative condensers shall be notified to the Local Authority in writing within 1 month of the change being made.

Consideration should be taken into account regarding the system volume / system dynamics to evaluate the half-life of the system.

## **6.2 Risk Management**

All Risk Assessments shall be carried out by approved competent persons.

Such Competent persons shall be able to demonstrate competence and experience of Risk Assessment.

Risk assessments shall identify recommendations according to the following criteria:

- Any remedial works that may be required to ensure the system meets the current L8 “Approved Code of Practice & Guidance” legislation.
- Identify scheduled maintenance checks/tasks and records that shall be adhered to in order to comply with current legislation and reduce the risk to an acceptable level.

Risk assessments should include an up-to-date line diagram of the system and consideration of the population at risk should also be made.

The risk assessment shall be reviewed whenever there is reason to believe that it is no longer valid (e.g. due to changes in plant, equipment, water usage patterns, new information about risks or control measures, or based on water testing results etc), as cited in L8 Part One, Section 38.

All systems likely to contain water between 20 - 45° C, and which may release a spray or aerosol during normal operation/maintenance shall not be operated until a suitable Risk Assessment on the system has been performed, and recommended control measures put in place.

The Risk Assessment and control measures shall be reviewed in any event at least every 2 years. Reviews of the assessment shall be documented and filed with the original Risk Assessment, as cited in L8 Part One, Section 38.

All cooling tower Risk Assessments shall include a statement on the physical condition and location of the cooling tower.

Where the Risk Assessment demonstrates that risks are insignificant, no control measures are necessary.

Maintenance personnel involved with water systems should be aware of and understand the need for appropriate PPE requirements.

### **6.3 Equipment Identification**

All cooling towers, calorifiers, humidifiers, showerheads, and other relevant plant identified by the Risk Assessment(s) shall be registered and labelled, where possible, with unique "Plant Item Numbers".

A 'site register' shall be maintained of all Calorifiers, Shower Heads and sentinel monitor points.

### **6.4 Maintenance and Sampling**

All maintenance and routine sampling shall be carried out in accordance with L8 and managed in accordance with specific risk assessments. Specific activities and frequency is detailed in the report.

Sampling shall be undertaken as per The British Standards Institution BS7592; 2008 (Methods for sampling legionella organisms in water and related matters).

Undertake analysis in accordance with ISO 11731:2017(British Standard 6068 water quality detection and enumeration of Legionella), at a UKAS accredited registered Laboratory.

### **6.5 Performance Reviews**

All performance reviews shall be carried out set against the following KPI as a minimum:-

- Risk Assessments are current, and compliant with L8, Part 1 Section 38.
- Control measures are in place, effective and recorded.
- Test data is recorded and archived. L8, Part 1, Record-Keeping Section 66 to 69.
- Cooling Tower audit and Operational Assessment has been completed and any issues raised have been addressed.

## **7.0 DOCUMENT MANAGEMENT**

### **7.1 Policy and Written Schemes**

This policy and associated written scheme are to be made available by the Operations Managers

Changes to the documents are to be made only by the Site Duty Holder and under approval of the Finance Audit and Risk Committee.

### **7.2 Risk assessment**

The risk assessments and reviews are to be kept in electronic format on Microsoft Team drive for access for management, nominated deputies and project managers on a building by building basis.

The action plans associated with the risk assessments are also to be kept on Microsoft Teams.

The risk assessments may also be kept on the staff LE as provided by the competent persons undertaking the contract to provide the risk assessment.

### **7.3 Service records**

The routine monitoring and maintenance results are to be kept in electronic format by the Site Duty holder

The service & monitoring records will be made available to those outside the Site Management on request.

A Copy of the most recent Risk assessment and any remedial works is kept in the Operations Managers office.