



## Safety Code of Practice

March 2018

Author	DBMAC Operations Manager	Intended target group	Principals, Business/Administration/Office Managers
Issued	March 2018	Next review due	March 2020 unless circumstances indicate amendments

# Legionella Control Policy



## Contents

- 1 Policy statement and introduction
- 2 Employers' legal duties
- 3 What is Legionella?
- 4 Definitions
- 5 Responsibilities
  - 5.1 The responsibility of the employer is to:
  - 5.2 The responsibility of the duty holder is to:
  - 5.3 The responsibility of the responsible person is to:
- 6 Risk assessment
- 7 Control measures
  - 7.1 Flushing and temperature testing procedures
  - 7.2 Scheme of control
  - 7.3 Lettings usage
- 8 Procedures for projects
- 9 Recording keeping and monitoring Legionella
  - 9.1 Training
  - 9.2 Support services and technical guidance

Appendix 1 – Temperature log sheet

# 1. POLICY STATEMENT AND INTRODUCTION

It is the policy of The Dominic Barberi Multi Academy Company (DBMAC) to ensure that appropriate precautions for the control of Legionella bacteria are identified through a 'Legionella' risk assessment process and appropriate control measures implemented to ensure, so far as is reasonably practicable, the health, safety and welfare of employees and others.

This Policy and any Procedures outlined within this document will apply to all DBMAC buildings with water systems including: hot and cold water supply systems, and all individuals employed and/or engaged by the DBMAC without exception.

Making sure adequate & appropriate management arrangements exist for controlling Legionella is a requirement defined within the "Legionnaires disease;

- The Control of Legionella bacteria in water systems', Approved Code of Practice and Guidance L8".
- The Health and Safety at Work, etc. Act 1974
- The Control of Substances Hazardous to Health 2002 (as amended) are relevant to Legionella issues.

To comply with its legal duties, the DBMAC will:

- Each facility/building is able to identify and assess sources of risk.
- Prepare a scheme for preventing or controlling the risk.
- Ensure suitable and sufficient resources are available.
- Implement, manage and monitor all precautionary control measures identified.
- Keep records of all such measures.
- Nominate employees and others with responsibility for implementing this policy.
- Review this Policy every 2 years.

## 2. EMPLOYER'S LEGAL DUTIES

The DBMAC has responsibility for compliance with The Health and Safety at Work etc. Act. (1974) and all associated legislation. This includes specific legislation relating to Legionella, as detailed and listed on the HSE website. This document should be read in conjunction with the DBMAC health and Safety Policy.

## 3. WHAT IS LEGIONELLA?

Legionella bacteria are commonly found in water. The bacteria multiply where temperatures are between 20-45°C and nutrients are available. The bacteria are dormant below 20°C and do not survive above 60°C. The bacteria thrive at temperatures between 20°C and 45°C but can be killed by elevated temperatures or chemical treatment.

Legionnaires' disease is a potentially fatal type of pneumonia, contracted by inhaling airborne water droplets containing viable Legionella bacteria. Such droplets can be created, for example, by: hot and cold water outlets; atomisers; wet air conditioning plant; and whirlpool or hydrotherapy baths.

Legionella bacteria can also cause less serious illnesses, which are not fatal or permanently debilitating. The collective term used to cover the group of diseases caused by Legionella bacteria is Legionellosis.

Anyone can develop Legionnaires' disease, particularly those who are ill as their immune system is less able to fight the disease; The elderly, smokers, alcoholics and those with cancer, diabetes or chronic respiratory or kidney disease are at more risk.

The presence of Legionella bacteria in water does not itself constitute a danger. However, the mode of contracting the disease is by inhalation of water in an aerosol. An aerosol may be caused by spraying, showering, running taps etc.

*HSE's Legionnaires' disease page provides information on managing the risks.*

## **4. DEFINITIONS**

Legionella - A potentially dangerous type of bacteria when inhaled with water vapour. Bacterium grows best in warm, nutrient rich water.

Legionella Risk Assessment - A specific risk assessment carried out to determine the risk level of Legionella proliferation, and exposure from a specific water system.

Sentinel Taps - These are the taps at the start and end of a re-circulating hot or cold water distribution system, which will be nearest and furthest from the storage tank.

## **5. RESPONSIBILITIES**

The DBMAC understands the risks associated with not having control measures in place. The breakdown of responsibilities below allows for appropriate controls measures.

### **5.1 The responsibility of the employer is to:**

- Follow all legal duties outlined by the HSE and all control measures related to legionella control.
- Ensure an appropriate policy is set out to assist duty holders with compliance and overall management control of Legionella risk.
- Ensure the appropriate funds are in place to manage/control/minimise risks associated to any DBMAC facility or building.
- Provide suitable training and support to duty holders and key staff responsible for managing effectively all aspects of Legionella control.

### **5.2 The responsibility of the duty holder is to:**

- Have overall responsibility and implement an effective management of Legionella control for the DBMAC buildings/facility under their control or responsibility. The duty holder is normally the Principal unless otherwise clearly stated and documented.
- Ensure compliance with this policy and legislation.
- Appoint a responsible person (if required or necessary) to manage the day to day activity for Legionella control.
- Ensure up to date Legionella risk assessments are in place to ensure appropriate actions and monitoring is in place.
- Ensure that all appropriate personnel are familiar with the contents of the Control of Legionella bacteria within water systems (Policy and any Procedures), insofar as it is relevant to their roles and responsibilities.

### **5.3 The responsibility of the responsible person is to:**

- Ensure appropriate actions are taken to reduce or mitigate risks identified.
- Ensure suitable and accurate records are in place for any maintenance and all accurate servicing records for any routine checks e.g. routine checks - weekly/monthly/termly/quarterly/6 monthly or yearly checks).
- Accurately record any repairs or maintenance that directly affects any water systems identified within the Legionella risk assessment(s).
- Undertake Legionella risk assessments reviews annually and evidence any changes from previous assessment(s)

## **6. RISK ASSESSMENT**

The DBMAC will employ a qualified and competent contractor to carry out the risk assessment(s) on its behalf. The risk assessment(s) should be held locally at each facility/buildings and be accessible and ready for any inspections at any time.

The DBMAC shall conduct risk assessment(s) with schematics with respect to Legionella control per building/facility. These will be reviewed annually and updated accordingly with any changes or improvements.

The need for a new risk assessment is only required per building/facility if there is;

- Significant changes to the water systems in place in the existing building(s).
- New buildings.
- Large planned or programmed alterations to the layout whereby the changes alter the water systems in place.
- Building where major refurbishment has been undertaken.
- Change of use of the building.

All risk assessments should consider risks to the following groups;

- Staff
- Students
- Visitors
- Lettings
- General public

The following factors should be considered in the Legionella risk assessments;

- contamination
- amplification
- transmission
- exposure
- host susceptibility

## **7. CONTROL MEASURES**

Control is normally achieved by suitable design and maintenance of the water system and its associated plant. Additional control is achieved by appropriate storage of water and delivery of water at temperatures which do not allow the bacteria to proliferate.

Each building/facility should store and distribute hot water as per recommendations and advice provided within the risk assessment.

The list below indicates areas of risk and where control is necessary within any DBMAC building/facility.

- Cooling towers/Air Conditioning (AC) equipment
- Showers and spray taps
- Domestic hot water system
- Tank/s and tank fed cold water systems
- Infrequently used outlets
- Drinking water distribution
- Water filters
- Water heaters
- Vending machines requiring a supply of mains water
- Water softeners
- Fogging and misting systems
- Materials in contact with water
- Borehole supply
- Legionella sampling
- Fume Cupboards with Scrubber Units
- Thermostatic Mixing Valves (TMV)
- Sampling of Boosted/tanked water for drinking purposes.
- Expansion Vessels

This information below is taken from HSG274

*2.34 It is important that there should be ease of access to all parts of the system, components and associated equipment for management and maintenance purposes, eg tanks, calorifiers, thermostatic mixing valves (TMVs), blending valves, circulation pumps etc. Isolation valves should be included in all locations to facilitate maintenance and the implementation of control measures. The pipework and any components should be easy to inspect so that the thermal insulation and temperature monitoring can be checked.*

Where it is deemed a requirement, users must be protected from scalding by controlling the delivery temperature of hot water from a tap to approximately 43°C by the use of thermostatic mixing valves (TMVs). Checks are required to ensure that the valves are working correctly. Fail safe checks are deemed acceptable and adequate unless there is an identified risk or evidence of notable build-up of scale within TMVs, if so, where required strip and descale the units.

The information below is taken from HSG274

#### ***Thermostatic mixing valves***

*2.74 TMVs are valves that use a temperature sensitive element and blend hot and cold water to produce water at a temperature that safeguards against the risk of scalding, typically between 38 °C and 46 °C depending on outlet use. The blended water downstream of TMVs may provide an environment in which Legionella can multiply, thus increasing the risks of exposure.*

*Risk assess whether the TMV fitting is required, and if not, remove.*

*Where needed, inspect, clean, descale and disinfect any strainers or filters associated with TMVs*

*To maintain protection against scald risk, TMVs require regular routine maintenance carried out by competent persons in accordance with the manufacturer's instructions. There is further information in paragraphs 2.152–2.168*

To achieve on-going control of Legionella, thorough flushing of the water system is required alongside any engineering controls and monitoring of any water outlets that are not in regular use.

## **7.1 Flushing and temperature testing procedures:**

## FLUSHING

- All Little Used Outlets (LUO) where identified (hot & cold) will be flushed through weekly and a record will be kept in writing on the water outlet flushing log sheet by the person carrying out the flushing.
- Flushing will last for at least two minutes at a reasonable flow rate.
- Where water outlets are used routinely, then this acts as the flushing routine and additional flushing is not required. However, flushing will always be required for all water outlets during periods of none use following any holiday periods. Flushing is only required at the end of the period of non-use.

## TEMPERATURE TESTING

The Sentinel cold and hot taps should be identified throughout the buildings and used for recording the temperatures on a monthly basis. Other outlets within the building should be tested on a rotational basis throughout the year; this ensures all outlets are checked. Where a TMV is in place (to prevent a scald risk) this should be tested monthly to ensure it is within the correct parameters and does not exceed 43°C.

**The cold water outlet temperature should be below 20°C after two minutes running.**

**The hot water outlet temperature should be above 50°C after one minutes running,**

If these temperatures cannot be maintained, then professional assistance must be sought immediately.

- Scientific tests may be required when there appears to be a problem with the water supply, e.g. discolouring, temperature problems, etc.
- If a positive Legionella test is reported there will be a re-test every 3 or 6 months, dependent upon the test results, until two consecutive clear readings are established.

## 7.2 Scheme of control:

### Monthly/Termly

- Take all temperatures at sentinel outlets
- Take temperature at flow and return from calorifier
- Take temperature at supply to TMV
- Check all taps for scale

### Quarterly

- Showers- clean and descale all heads and hoses where practicable

### Six monthly

- Inspect log book and review management procedures
- Water sampling to any hard to reach or inaccessible equipment

### Annually

- Visual inspection of CWST
- Visual inspection of internal surfaces if possible during the annual heating service
- Take temperature of CWST at ball valve and remote from valve

## 7.3 Lettings usage

Every DBMAC building/facility should consider all aspects of lettings usage and ensure any Legionella risks or controls cover any school usage outside of normal operating hours.

# 8. PROCEDURES FOR PROJECTS

All new water systems or modifications will be designed, constructed and installed in accordance with current legislation.

In order to ensure a consistent and compliant standard of delivery for all DBMAC projects, all final disinfection, risk assessment and sampling to project related works must be undertaken by an approved contractor or the DBMAC appointed contractor.

It will be the responsibility of the duty holder or the main contractors to facilitate all the necessary arrangements with the Legionella contractor in accordance with the current legislation.

Any project managers involved with refurbishment works must liaise with the duty holder when unusual or minor domestic alterations are carried out. At a minimum compliance with *BS EN 806-5:2012 Specifications for installations inside buildings conveying water for human consumption* is required.

## 9. RECORD KEEPING AND MONITORING LEGIONELLA

In order to ensure good control measures are in place, each DBMAC facility/building should have detailed monitoring and records that are stored accurately. This includes;

- All on-going monitoring visits
- Service visit records and amendments
- Any visit sheets and certification
- Any chlorination or sampling documents
- Any appropriate remedial works documentation and sign off sheets
- Detailed locations of outlets and systems around each building/facility
- Completed temperature log sheet, de-scaling records and shower head cleaning

It is recommended that each site has an annual programme in place to help control monitoring.

The duty holder, responsible person and any key staff involved in the frequency checks should have full access to Legionella records and data.

As per each DBMAC building/facility scheme of control, it is vitally important that records are maintained.

Appendix 1- Temperature log sheet can be used to help record site data.

### 9.1 Training

Staff involved in the management of water systems will be trained by a competent person to carry out their responsibilities and duties. This includes the overall management/compliance and Legionella control measures.

The following training modules should be covered for staff:

- Training on all aspects of Legionella control
- Training for specific monitoring i.e. temperature testing, shower cleaning and flushing low use outlets
- Risk management

Records of all training for staff should be logged within the Legionella control data.

### 9.2 Support services and technical guidance

For any specific Legionella queries or advice, there are a number of support services available

1. HSE website
2. Oxfordshire County Council health and safety services
3. DBMAC Legionella approved contractor

Relevant legislation, guidance and standards to manage Legionella are available and support information via the HSE website.

HSE approved code of practice - The control of Legionella bacteria in water systems. Provides technical guidance on the management of water systems for Legionella control.

- Legionnaires' disease - Technical guidance - HSG274  
The guidance is in three parts:
- Part 1: The Control of Legionella Bacteria in Evaporative Cooling Systems.
- Part 2: The Control of Legionella Bacteria in Hot and Cold Water Systems.
- Part 3: The Control of Legionella Bacteria in Other Risk Systems.

Approved by DBMAC Board



Signed \_\_\_\_\_

Date \_\_\_ 28<sup>th</sup> February 2018

Name \_\_\_ David Forster (Chair) \_\_\_

Date for review: March 2020



Signed \_\_\_\_\_