

Summary

This code of practice applies to the control of Legionella in water systems and items of equipment that are not considered to be part of the building fabric and which are susceptible to colonisation by Legionella bacteria growth.

Such water systems and equipment would contain water which is held or recirculated at a temperature between 20 - 45 °C and would not be maintained by Estates. In this context, the term and Functions.

Schools/Functions should avoid creating or adopting new water systems or equipment and should obtain authorisation in writing from the Estates Legionella Duty Holder/Responsible Person before creating or adopting new water systems and equipment.

Estates has produced the *Legionella* which should be read in conjunction with this document (Safety Code of Practice 58 Legionella in Departmental).

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1 INTRODUCTION

This Code of Practice establish responsibilities and requirements around control of legionella bacteria in water systems outside the control of Estates.

Legionella bacteria can cause serious ill-health, including a potentially fatal form of pneumonia. Everyone can be infected. The risk increases with age, and some people are at higher risk, including people over 45, people suffering from chronic disease or with an impaired immune system.

Legionella bacteria are common in natural water sources, but usually in low numbers. disease is normally contracted by inhaling small droplets of water in the air which contain bacteria. Outbreaks of the illness typically occur from exposure to legionella growing in purpose-built systems where water is maintained at a temperature high enough to encourage growth, conditions are favourable, and the bacteria has multiplied. Consequently it is important to control the risks by not allowing proliferation of the organisms in water systems and reducing exposure to water droplets. This reduces the risk of exposure to legionella bacteria.

The control of legionella in most University water systems is established *Legionella* produced by Estates. It is designed to ensure compliance with the Approved Code of Practice L8 *ontrol of legionella bacteria in water systems*. The *Policy* applies to water systems considered part of the fabric of buildings and managed by Estates.

However, the *Policy* does not address equipment and water systems which are owned, operated or maintained by Schools and Functions other than Estates. Schools/Functions have various water systems or equipment which uses or stores water that may potentially produce a legionella risk. Schools/Functions must have adequate controls in place to eliminate the risks associated with this potentially fatal disease, or to reduce the risk to an acceptable level as far as reasonably practicable. This Code of Practice provides clarity for these systems.

Heads of Schools/Functions ar treatment contractor to act as their competent person and to take responsibility for managing the risks to help Schools/Functions to comply with their health and safety duties.

2 SCOPE

This Code of Practice applies to water systems and equipment under the control of Schools and Functions other than Estates. This may include irrigationility for managing the

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This Code of Practice applies to equipment
glasshouses and polytunnels, or at fieldwork sites.

campuses, farms, within

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specialist water treatment contractors.

Legionella

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operate your water system or equipment under conditions that prevent or adequately control the growth and multiplication of legionella.

If a potential legionella hazard is identified, then the risk assessment needs to consider whether the process could aerosolise or create droplets that could allow infection; in other words, a credible and relevant exposure risk be created.

Following the risk assessment, appropriate control measures must be put in place. In most cases, this would be by the establishment of a suitable cleaning and/or maintenance schedule, which may also involve the use of suitable biocides.

considered for use. Note that the use of biocides will require a COSHH assessment before being used.

It is important to control the risks by introducing measures that will both prevent or inhibit proliferation of the organisms in the water and reduce exposure to water droplets as much as possible.

The extent and complexity of any required control measures will vary from system to system depending on the level of risk. If you identify a risk that you are unable to prevent, you must introduce a course of action ie a written control scheme, that will help you to manage the risk from legionella by implementing effective control measures which could include:

- your system, eg develop a schematic diagram
- who is responsible for carrying out the assessment and managing its implementation
- the safe and correct operation of your system
- what control methods and other precautions you will be using
- what checks will be carried out, and how often will they be carried out, to ensure the controls remain effective

You should:

- ensure that the release of water spray is properly controlled
- avoid water temperatures and conditions that favour the growth of legionella and other micro-organisms
- ensure water cannot stagnate anywhere in the system by keeping pipe lengths as short as possible or removing redundant pipework
- avoid materials that encourage the growth of legionella (The Water Fittings & Materials Directory references fittings, materials, and appliances approved for use on the UK Water Supply System by the Water Regulations Advisory Scheme)

Control procedures

Recommendations for specific items of departmental equipment are:

Laboratory water baths recirculating or storing water between 20–45 °C

If possible, the water bath should be thermally disinfected on a monthly basis, by increasing the temperature to >60°C and maintaining the increased temperature for 30 minutes. After treatment, the water should be disposed of to drain without splashing, and the bath thoroughly cleaned and descaled before being refilled with deionised or distilled water.

Using deionised or distilled water will reduce the accumulation of limescale, which can harbour biofilms / Legionella organisms. If thermal disinfection is not possible and the volume of water contained is large, it may be impracticable to regularly drain the water. In such cases, the use of a chemical biocide may be necessary – the manufacturer of the water bath should be consulted to identify suitable chemicals that are compatible with the equipment. In all cases, measures must be taken to prevent splashing both during use and cleaning/ maintenance.

Laboratory water baths operating in the critical temperature zone are liable to support a thriving population of Legionella and even baths operating at a lower temperature (<20°C) may become contaminated but the growth rate of the organisms is reduced. Baths regularly operated at temperatures > 55°C are normally free of Legionella.

Normally, the risk of dissemination of contaminated water droplets is low, but if a stirrer or

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routine maintenance is undertaken by Departmental staff. The results of any quality checks must be recorded and returned to the Estates Legionella Duty Holder.

Examples include units to provide ultra-pure water for analytical instruments in laboratories, reverse osmosis units; hollow-fibre cartridge water purifiers etc.

Normally, the ultra-pure or High Quality (HQ) water produced by the unit is not liable to be

Vending machines that are not permanently plumbed into the building water system,

Note that some equipment such as vending machines dispensing drinks may well be under a maintenance contract from the manufacturer/ supplier. The terms of the contract should be carefully studied to examine whether (for example) routine cleaning is included. See also the