The Workplace Health and Safety Office

UNIVERSITY POLICY AND MANAGEMENT PROCEDURE

Legionella

Statement

This Management Procedure was approved and authorised by the Health, Safety and Welfare Committee (now Workplace Health and Safety Committee) on ***05 June 2007*** *on behalf of the University of York Council and forms part of the Health and Safety Policy of the University of York.*

This document is University Policy for good health and safety management practice. This University Policy provides Deans of Faculty, Heads of Departments, Heads of College and all managers, staff and students with the necessary information to incorporate healthy and safe practices and relevant procedures into their activities. Divergence from this University Policy may result in Deans of Faculty, Heads of Departments, Heads of College and the University of York being exposed to possible legal proceedings.

The use of this University Policy and the incorporation of its requirements into working practices and activities will ensure that the University of York and its community achieves compliance with its legal duties with regards to health and safety.

The most recent version of this Management Procedure is available at https://www.york.ac.uk/admin/hsas/safetynet/atoz.htm

Date of Review	*October 2023*	*By*	*The Director of Health & Safety*
Date of Last Review	*June 2018*	*By*	*The Director of Health, Safety and Security*
Date of Next Review	*October 2025*		

UNIVERSITY POLICY

1. INTRODUCTION

The University of York (University) has a general legal duty to protect the health and safety of staff, students, visitors and the general public. Under this duty and the duty to prevent exposure to hazardous substances, the University must manage the potential for contamination of water systems by the *Legionella* bacteria (Legionella pneumophila - the cause of the illness known as Legionnaires Disease or Legionellosis). To achieve this, the University intends to adopt the principles of control and management identified in the Health and Safety Commissions (HSC) Approved Code of Practice and Guidance Document L8 (ACOP L8) The Control of Legionella Bacteria in Water Systems (November 2013) and HSG 274 Parts 2 (The Control of Legionella Bacteria in Hot and Cold Water Systems) and Part 3 (The Control of Legionella in Other Risk Systems).

2. BACKGROUND

Legionnaires' disease is a potentially fatal form of pneumonia which can affect anybody, but which principally affects those who are susceptible because of age, illness, immunosuppression, smoking etc. It is caused by the bacterium Legionella pneumophila and related bacteria. *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. On average there are 200-300 reported cases in England and Wales each year, Scotland has its own reporting system.

Legionnaires' disease is normally contracted by the individual inhaling *Legionella* bacteria either in tiny droplets of water or in droplet nuclei (particles left after the water has evaporated).

The incubation period is 2-10 days (usually 3-6 days).

3. SCOPE AND PURPOSE

This Management Procedure forms part of the Workplace Health and Safety Policy Statement of the University and therefore applies to all areas of the University. The purpose of the document is to define the responsibilities and procedures for managing the control of *Legionella* contamination of University water systems.

4. AIMS

The aims of this Management Procedure are:

- To adopt the principles of control and management specified in ACOP L8.
- To eliminate the potential for *Legionella* contamination of water systems in order to prevent any danger.
- To comply with its legal duties and the above areas the University will:

- Identify and assess sources of risk.
- Prepare a scheme for preventing or controlling the risk.
- Implement, manage and monitor all precautionary control measures identified.
- Consider alternative systems or processes designed to eliminate any risks.
- Keep records of precautionary measures.
- Identify the responsibilities of any employees and contractors within the University establishment.

5. APPLICATION

A reasonably foreseeable risk of legionella bacteria exists in; Water systems incorporating a cooling tower, water systems incorporating an evaporative condenser, hot and cold water systems. Other plants and systems containing water which utilises water between 20°c and 45°c and which may release a spray or aerosol (i.e. a cloud of droplets and/or droplet nuclei) during operation or when it is being maintained.

Hot and Cold Water, Other Plant and Systems

- All occupied buildings, with the exception of some Portakabins.
- Showers, drenching showers, hose pipes (i.e. cricket squares, glasshouses, garden watering points), fire hose reels, fire hydrants, baths, basins and sinks, taps, spray-taps/bib-taps, horticultural irrigation and misting systems, ornamental ponds/fountains, humidifiers, lathe and machine tool cutting fluids, dead legs at vending machines, ice-making machines, condensate/water carryover in air-conditioning units, glass/dish/cage wash machines, experimental equipment which may generate a water aerosol.

Any system, plant, equipment, service introduced at a Departmental level remains the responsibility of the Department to comply with the requirements of this Management Procedure and ACOP L8.

6. ROLES AND RESPONSIBILITIES

6.1 University Duty Holder (Legionella)

The Director of Estates will take managerial responsibility for the implementation of precautions to prevent the proliferation of *Legionella* bacteria within the University's water systems.

The Director of Estates will ensure the development, maintenance and implementation of a Written Scheme for controlling the risks of exposure to *Legionella* bacteria.

The Director of Estates will appoint a University Responsible Person (URP) *(Legionella)*.

6.2 University Responsible Person (Legionella)

The University Responsible Person will undertake the roles and responsibilities of URP *(Legionella)* and shall have such ability, experience, instruction, information, training,

competence and resources to enable them to carry out their tasks competently and safely, they should:

- Know the potential sources and the risks that a *Legionella* bacterium presents.
- Know the control measures and precautions necessary to protect any people concerned, and their significance.
- Know the control measures to be taken to ensure such controls remain effective, and their significance.
- Ensure that systems are designed to comply with the HSC Approved Code of Practice, Guidance document (ACOP) L8, The Control of Legionella Bacteria in Water systems and HSG 274 Parts 2 and 3.
- Ensure that only competent and skilled staff undertake any testing, monitoring, maintenance, design, alteration or installation of water systems.
- Know where to access competent help to assess the risks of exposure to legionella bacteria in relation to the University's water systems.
- Undertake competency checks, monitoring and control of contractors with respect of the Control of *Legionella* Bacteria in Water systems.

In the absence of the URP *(Legionella)* the Engineering, Utilities & Infra-structure Manager will assume the roles and responsibilities of the deputy, shall be fully competent with the above criteria, and shall take over such duties on a temporary basis.

6.3 Competent Persons (Legionella)

Competent Persons *(Legionella)* (CP *(Legionella)*) will only work on University water systems where the testing, monitoring, maintenance, design, alteration or installation activities have been approved and authorised by the URP *(Legionella)*, ensuring that their activities limit or prevent the conditions conducive to the proliferation of *Legionella* bacteria.

ARRANGEMENTS

7. RISK ASSESSMENT

The University Responsible Person *(Legionella)* will appoint a professionally qualified and competent specialist to assess risks arising from the potential for water systems to be contaminated with *Legionella* bacteria.

This assessment is to include (but should not be limited to) the potential for bacterial growth, potential for exposure by persons, the identification of any persons at risk, and the necessary control measures to be implemented, including any means of creating and disseminating breathable droplets, aerosol or nuclei. These will include the source of system supply water, for example, whether from a mains supply or not; possible sources of contamination of the water supply; the plant operating characteristics of the systems and unusual, but reasonably foreseeable operating conditions, including breakdowns.

The completed risk assessment will be subject to regular reviews at least annually and, in any case, whenever there is reason to believe that the original risk assessment may no longer be valid.

The risk assessment will be completed following a detailed site survey of the water systems, culminating in the provision of a description of the water system design, a schematic drawing record of the water system installed, and a written assessment of the risks, and the necessary control measures to be adopted. The completed assessment of risk will be retained within a Building Water System Logbook, all stored electronically.

To enable the University's staff and students to understand the risk of systems and buildings relative to each other, the findings of all risk assessments will be considered together and reported upon at the Key Service Meeting (KSM) Statutory Maintenance, as a basis for prioritising the application of resources to eliminate or control any risk.

8. CONTROL METHODOLOGY

The risk from exposure will normally be controlled by measures which do not allow the proliferation of *Legionella* bacteria in the system and reduce exposure to water droplets and aerosols. Precautions will include the following:

- Controlling the release of water spray.
- Avoiding water temperatures and conditions that favour the proliferation of legionella bacteria and other microorganisms.
- Avoiding water stagnation.
- Avoiding the use of materials that harbour bacteria and other microorganisms or provide nutrients for microbial growth.
- Maintaining the cleanliness of the system and the water in it.
- Possible use of water treatment techniques as appropriate.
- Action to ensure the correct and safe operation and maintenance of the system.

Estates Services will specify, schedule, design, monitor and report on all controls necessary to manage *Legionella* bacteria within the University water systems.

Individual University Departments will ensure that departmental equipment is regularly serviced including inspection, cleaning and disinfecting and maintained to the standard required to control *Legionella* bacteria within the University. Individual University Departments will ensure that records of servicing and maintenance are kept and maintained.

On behalf of the University and in consultation with the Departmental Responsible Person, appointed specialist companies will produce a Building Water Systems Logbook for each building or group of buildings on campus that will contain all records of control measures implemented.

These Logbooks will be held electronically within Estates Services and contain the following:

- Risk Assessment for the system.
- Description of system design.
- Schematic diagrams of the system.
- Records of control measures adopted and checks taken.
- Disinfection record certificates.
- Records of any remedial work required/carried out.
- Records of monitoring and auditing.

The Water Systems Logbook will guide those with responsibilities for water systems in buildings through all the possible installations that may be under their control so that, if the various sections are completed with the site details, and regular maintenance routines for monitoring, testing and maintenance/cleaning/disinfection are followed, they will comply with current best practice toward legal compliance.

Independent audits of the systems will be undertaken.

9. DESIGN, INSTALLATION AND MAINTENANCE STANDARDS

The University Duty Holder will issue Design, Installation and Maintenance Standards through Estates Services. These Standards will apply to all University water systems, including those at a Departmental level.

10. TEMPERATURE CONTROL REGIME

The University has adopted a Temperature Control Regime as its principal control methodology. It is essential that the systems are well maintained and kept clean as the efficacy of a temperature control regime may be substantially reduced in systems that are fouled with organic matter such as slimes or inorganic matter such as scale. Documenting the results of the procedures in accordance with the Written Scheme to underpin the principles of this regime and demonstrate compliance at both the University and Departmental level.

11. INFREQUENTLY USED OUTLETS

Water outlets that are unused for a week or more must be flushed through on a weekly basis and this activity is recorded. Special consideration should be given to disabled toilets as these are used less frequently.

A shower or toilet water cistern (WC) which may not be used for a week or more must be flushed through on a weekly basis and this activity is recorded.

12. TRAINING/COMPETENCY AND DEVELOPMENT

The URP *(Legionella)* and Deputy Responsible Person will be formally trained and achieve certificated level of competence.
Departmental Responsible Persons, technicians, maintenance staff and engineers will be trained

by the URP *(Legionella)* or Deputy. The URP *(Legionella)* will assess and verify the competence of these trained persons and notify the HoD/Line Manager accordingly.

13. RECORD KEEPING

The URP *(Legionella)* will develop an appropriate record keeping system for all water systems including those maintained at a Departmental level. Departmental Responsible Persons will complete all relevant records and ensure copies are sent to the URP *(Legionella)*.

Training records demonstrating competency of key staff will be maintained and retained by the URP *(Legionella)*.

14. AUDITING

Estates Services will arrange suitable and sufficient audit arrangements to ensure compliance with this Management Procedure. A written report of observations, non-compliance and corrective actions will be held by the URP *(Legionella)*. A written report of the findings of audits will be presented to the University's Workplace Health and Safety Committee (WHSC).

The Workplace Health and Safety Office (WH&SO) will undertake independent audits and monitoring of the Management Procedures and will report observations, non-compliance and corrective actions as necessary to relevant KSM and to the WHSC.

15. PROCEDURES IN THE EVENT OF AN OUTBREAK OF *LEGIONELLOSIS*

In the unlikely event that a case of legionellosis is confirmed at The University, as is defined by the Public Health Laboratory Service (PHLS) where two or more confirmed cases of legionellosis occurring in the same locality within a six-month period and a location is defined in terms of the geographical proximity of the cases and requires a degree of judgement.

The Director of Health and Safety (DHS) in consultation with The University Duty Holder (*Legionella*) will make the necessary arrangements to notify the Local Authority's Proper Officer as soon as is reasonably possible.

It is the responsibility of the Proper Officer for the declaration of an outbreak. The Proper Officer is appointed by the local authority under public health legislation and is usually a Consultant in Communicable Disease Control (CCDC).

The Local Authority will establish the necessary incident plans to investigate any major outbreaks of infectious disease including legionellosis. These are activated by the Proper Officer who invokes an Outbreak Committee, whose primary purpose is to protect public health and prevent further infection. This will normally be set up to manage the incident and will involve representatives of all the agencies involved. The HSE or the Local Authority Environmental Health

Officer (EHO) may be involved in the investigation of outbreaks, their aim being to pursue compliance with health and safety legislation.

The local authority, CCDC or EHO acting on their behalf (often with the relevant officer from the enforcing authorities - either HSE or the Local Authority) would undertake a site visit.

The Responsible Person *(Legionella)* as part of an outbreak investigation and control regime will support the HSE or Local Authority EHO by the following:

- By shutting-down any processes which are capable of generating and disseminating airborne water droplets and keeping them shutdown until sampling procedures and any remedial cleaning or other work has been done.
- By taking water samples from the system before any emergency disinfection is undertaken. This will help the investigation of the cause of the illness. The investigating officers from the local authority may take samples or require them to be taken.
- To cooperate fully in an investigation of any plant that may be suspected of being involved in the cause of the outbreak. This may involve, for example, tracing of all pipework runs, detailed scrutiny of all operational records, statements from plant operatives and managers, statements from water treatment contractors or consultants.