

Europa School UK

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Europa School UK Management of Water Systems and Control of Legionella Bacteria Policy

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1.0 **PURPOSE**

Europa School UK recognises its legal responsibilities to take all reasonable precautions to prevent or control the risks to staff, students, and others from exposure to Legionella bacteria.

This policy defines how the school will identify, control and manage the risks arising from exposure to Legionella bacteria in its water systems in accordance with the HSE's Approved Code of Practice (L8) and associated legislation.

This document will outline the school's responsibilities and how these will be managed.

2.0 **SCOPE**

This policy will apply to all workplaces where the school has control over the workplace; the hot and cold water systems, and any system containing water where there is a risk of legionella or other bacteria developing and being transmitted to people via release of spray or aerosol during operation or maintenance. It applies to employees, students, contractors, members of the public and others that may be affected by the school's work activities e.g. agency workers.

3.0 SCHOOL POLICY STATEMENT FOR LEGIONELLA MANAGEMENT

The school intends to adopt the principles of control and management identified in HSE Approved Code of Practice and Guidance 'L.8 (2013) - The control of legionella bacteria in water systems' together with the HSE Technical Guidance HSG274 Part 2: 'Hot and cold water systems' and Part 3: 'Other risk systems' as far as reasonably practicable. The School will take all reasonable precautions to ensure that its staff, students, contractors and visitors are not exposed to airborne Legionella bacteria from building services' hot or cold water systems while on its premises.

All new projects will be installed, commissioned and handed over in accordance with the 'HSE Approved Code of Practice L8 (2013) - The control of legionella bacteria in water systems'.

4.0 **KEY PRINCIPLES**

The school will ensure that:

- That appropriately qualified, trained, technically competent and experienced staff are available and resourced to adequately manage water systems and associated legionella control
- The risks from the proliferation of legionella bacteria that may exist in its water systems are identified, controlled and managed, in line with the HSE's Approved Code of Practice (L8)
- There are procedures in place to deal with any legionella incidents i.e. if the control measures fall short of what is expected

5.0 DEFINITION OF AND BACKGROUND INFORMATION ABOUT LEGIONELLA

Legionellosis is the term used for infections caused by bacteria of the genus Legionella. The most serious of these diseases is Legionnaires' disease. This is a severe form of pneumonia with a moderately high fatality rate. This form of pneumonia was first identified following a large outbreak of pneumonia among the attendees of an American Legion Convention in Philadelphia in 1976 and a previously unknown bacterium was identified. This bacterium was named Legionella Pneumophila. To date there are at least 40 forms of legionella bacteria which have been identified, however Legionella Pneumophila accounts for approximately 90% of all reported cases of legionellosis and is the principal cause of Legionnaires' disease.

Legionella bacteria are naturally occurring and can be found in environmental water sources such as rivers and lakes. The bacteria can survive under a range of temperatures, typically between 20°C and 45°C. However, below 20°C bacteria are dormant and are only able to multiply when water temperatures increase. Thermal inactivation of Legionella bacteria starts in water of approximately 50°C. Water temperatures of 60°C have been found to destroy 90% of Legionella Pneumophila within approximately 2 minutes. The preference of legionella bacteria for warm water often means that bacteria are capable of colonising artificial water sources and equipment containing water.

Legionellosis is usually contracted via the inhalation of aerosol contaminated with legionella bacteria. However, the individual has to be susceptible for infection. Studies have shown that only a small number (approximately 5%) of those exposed to the bacteria develop the disease. However, increasing age (particularly over 45 years old), smoking, being a heavy drinker, being male and being immunosuppressed increase an individual's susceptibility. The disease cannot be passed from one person to another.

Several factors are therefore required in order to create a risk of acquiring legionellosis:

- The presence of legionella bacteria
- Conditions suitable for multiplication of the bacteria. This would include nutrient source such as debris, sediment or sludge, slow moving water and a suitable temperature (between 20°C and 45°C)
- The means of creating and disseminating an aerosol
- The presence of individuals who may be exposed to the aerosol
- The presence of individuals who are susceptible to contracting legionellosis e.g. immunosuppressed; smokers; heavy drinkers and those over 45 years of age

6.0 **DEFINITION OF TERMS**

In this policy, the following definitions apply:

- School: means Europa School UK
- **Duty Holder:** is the person on whom the statutory duty falls and has the legal responsibility to ensure that health and safety is managed effectively. The duty holder cannot delegate this duty but can delegate managerial responsibility to the Responsible Person.
- **Responsible Person:** is an individual appointed with, and who has responsibility under, the authority of the duty holder for ensuring that the organisation's responsibilities for the control of legionella are met and that all individuals and organisations assigned to carry out tasks in the preventative scheme are competent to do so. The responsible person has managerial responsibility for the implementation of the findings of the legionella risk assessment and written scheme.

- **Competent Person:** refers to all persons who are suitably informed, instructed and trained with their suitability assessed in relation to ensuring that their assigned tasks are performed in a safe and technically competent manner. Competence is viewed by the HSE as a combination of sufficient training, experience, knowledge and other qualities that are needed.
- **Contractor:** means anyone the school employs to do work of any kind who is not an employee.
- Water Hygiene Service Provider: a person or company appointed by the 'Responsible Person' to assist the organisation in the prevention, control and compliance of the risks associated with Legionella bacteria in line with HSE's Approved Code of Practice (L8) as agreed in the contract specification.
- **HSE**: means the Health and Safety Executive.
- Legionella Risk Assessment: is the process of identifying and evaluating the risk of exposure to legionella bacteria from work activities and from water systems or equipment.
- **'L8'**: is the Approved Code of Practice document "Legionnaires' Disease: The control of legionella bacteria in water systems'".
- **Proliferation Temperatures**: water temperatures in the range 20°C to 45°C are widely considered to be the parameters which favour growth. The organisms do not appear to multiply significantly below 20°C and will not normally survive above 60°C. They may, however, remain dormant in cool water and multiply only when water temperatures reach a suitable level.
- **Persons at Risk:** everyone is susceptible to infection; however, the risk increases with age, but some people are at a higher risk e.g. people over 45, smokers, heavy drinkers, people suffering from chronic respiratory or kidney disease, diabetes, lung and heart disease or anyone with an impaired immune system.
- Written Scheme: 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. It will include the following risk assessment information; schematic drawing showing the layout of the water systems and their location within and around the premises; the correct and safe operation of the system; precautions in place to prevent or minimise risk associated with the system; checks to carry out to ensure the written scheme is effective and the frequency of such checks; and remedial action to take if the written scheme is shown to be not effective.
- **ACoP:** means Approved Code of Practice. The HSE issue ACoPs that give guidance on how to comply with the regulations to which they apply. Following an ACoP is not mandatory, but in a court of law, failure to adopt the advice in an ACoP will be regarded as having failed to comply with the law unless the defendant can prove they have complied by alternative equivalent means.
- Hot water storage vessel: means an apparatus used for the transfer of heat to water in a vessel, the source of heat being contained within a pipe or coil immersed in the water.
- Sentinel outlets/ sample points: are considered the first and last taps on each recirculating hot loop. For cold, mains and non-recirculating loops, the nearest and furthest taps from the storage vessel/ incoming supply on each branch are to be used in conjunction the guidance in paragraphs 2.59, 2.62 2.64 of HSG274 Part 2, with particular reference to the identification of subordinate and

tertiary loops for monitoring.

- **Cold water service:** installation of plant, pipes, and fittings in which cold water is stored, distributed, and subsequently discharged.
- **Hot water service:** installation of plant, pipes, and fittings in which cold water is heated, distributed, and subsequently discharged (not including cold water tank or cistern).
- **Dead leg:** a length of redundant or abandoned leg of water system pipework.
- Infrequently used outlet: an outlet (e.g. tap, shower, toilet, lab equipment etc.) that is unused or rarely used, which may increase the risk of legionella bacteria growth.
- **Domestic water:** hot and cold water intended for drinking, washing, cooking, food preparation or other domestic purposes

The organisational structure for the implementation and management of the school's statutory health and safety duties are described in detail in the Health and Safety Policy. Specific duties relating to this policy are as detailed below.



7.1 **Principal – Duty Holder**

Is the Duty Holder from a legal perspective. However, the day to day responsibilities of ensuring this policy is adhered to are set out below.

7.2 **PPM contractor (Dalkia) - Responsible Person**

The Site Manager will ensure:

- that the responsibilities of the 'Duty Holder' as defined in the HSE's Approved Code of Practice (L8) are executed on behalf of the school within the Estates and Capital Development department's undertaking.
- that this policy is brought to the attention of and complied with by all contractors engaged to conduct work for or on behalf of the school.
- that contractors and sub-contractors under their control receive a school Health and Safety induction.
- that any work on the school's water systems under their control will be undertaken using qualified, competent persons, with specific expertise on water systems, and that approved risk assessments, safe systems of work/ method statements are in place prior to any works commencing. This includes works on existing systems and new installations.
- that a legionella risk assessment complete with a written scheme is undertaken, adhered to, monitored and reviewed on a regular basis to ensure the school

conforms with HSE's Approved Code of Practice (L8) on all premises under its control.

- that any issues or concerns raised by the Water Hygiene Service Provider on current control measures are discussed and that any necessary remedial actions are taken in a timely manner.
- that all Planned Preventative Maintenance (PPM) work and remedial work undertaken on school water systems is carried out on time, to current specifications and is recorded in the Legionella risk assessment folder.
- in conjunction with the Water Hygiene Specialist, ensure that the Legionella risk assessment and Written Scheme are kept up to date.
- that communication and coordination is maintained between all parties who work on school water systems, plant and equipment, this includes the Site team staff and contractors.
- that they take a lead role in the event of a legionella outbreak situation and inform the Duty Holder and Senior Management Team of such an outbreak.
- that they notify the Senior Management Team should any member of staff be involved in an incident of accidental Legionella exposure, in order that the appropriate advice can be given, and action taken.

7.3 Facilities Manager – Deputy Responsible Person

The Facilities manager will act on behalf of the Responsible Person (Legionella) in respect of this policy as and when required. In the event that urgent decisions are required on design (approving modifications to water systems) he is empowered to engage a specialist water consultant for clarification.

In the event that whilst deputising for the Responsible Person, the Deputy Responsible Person is uncertain of any actions to be taken he shall in the first instance take the matter up with the Duty Holder for direction.

All decisions or actions relating to the management and control of legionella shall be fully documented and recorded in the water systems records and the matter(s) and action(s) taken shall be brought to the attention of the Responsible Person on his return to the school.

7.4 Dalkia contractors – Authorised Persons

The Dalkia PPM contractors will ensure:

- that resources are available to the respective Estates Operatives teams
- that maintenance contractors' work is monitored, and they discharge their responsibilities as specified
- that they provide support to the Responsible Person
- that they provide reports when requested by the Responsible Person
- that Planned Preventative Maintenance (PPM) instructions are completed within the required timeframe
- that records/ evidence that all required maintenance works have been undertaken and records kept, and that a clear audit trail is maintained.
- that where tap temperature measurements are carried out by the Estates Operatives, they are completed in accordance with the programme
- that where reports highlight anomalies in the system, actions are identified and effectively managed
- that their respective teams effectively manage/ monitor the water treatment contract
- that the Dalkia teams only use trained operatives, who understand their contribution to the effective management of legionella

- that the Responsible Person is advised of all significant changes or potential changes in water installations and consumption
- that the Dalkia team undertake their duties regarding maintenance activities including:
 - visual inspection of water tanks
 - tap temperature measurement
 - tank temperature measurement
 - o calorifier temperature measurements
 - o infrequently used outlets
 - shower flushing
 - expansion vessel maintenance
 - o remedial work associated with Legionella Risk Assessments
- ensuring that by liaison with the respective stakeholders, a 100% return for all associated legionella records and maintenance/inspection/test instructions is achieved
- ensuring that where worksheets indicate additional work is required 'reworksheets' are issued with clear and precise instructions, and to monitor that rework is completed within agreed timescale
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7.5 **The Water Hygiene Services Provider**

The Water Hygiene Services Provider is appointed by the 'Responsible Person' and must have current membership of the Legionella Control Association (LCA). They will be responsible for:

- delivering a comprehensive water hygiene and control of Legionella bacteria service to ensure the school complies with the HSE's Approved Code of Practice (L8)
- carrying out routine testing, monitoring, flushing and cleaning of all systems on a regular basis as agreed in the contract specification
- updating all existing risk assessments as required under the contract specification
- providing a water hygiene and control of Legionella bacteria records management system which complies with current regulations and the HSE's Approved Code of Practice (L8), as agreed in the contract specification
- agreeing and implementing prioritised corrective actions with the Responsible Person; and highlighting any concerns e.g. dead legs, failure of a control measure, or a legionella risk to the Estates and Capital Development department in a timely manner
- ensuring that any persons under their control i.e. employees, sub- contractors etc. that they instruct to work on the school's water systems, will be suitably qualified, competent, and with specific expertise on water systems, and that approved risk assessments, safe systems of work/ method statements are in place prior to any works commencing, and that they operate in accordance with school health and safety standards, and all appropriate health and safety legislation

Failure to comply with this policy will mean immediate suspension of work activities until such a time that appropriate controls are in place.

7.7 Other (unappointed) school wide general roles

7.7.1 Heads /Deputy Heads of School.

It is the responsibility of all Heads/Deputy Heads to:

- ensure that their staff are aware of and comply with this policy
- notify and take advice from the Site Team prior to any equipment being purchased, leased or rented that will require connection to the school's water infrastructure e.g. water features, water fountains, pressure washers, hose pipes etc.
- ensure that NO modifications/ alterations or additions to water systems are carried out, unless approval is obtained from the 'Responsible Person'
- Act on any advice given by the Site team regarding Legionella bacteria control

7.7.2 Human Resources

The Human Resources department will:

- in conjunction with the Senior Management Team department, identify and arrange training as is necessary
- notify the school's Occupational Health Provider should any member of staff be involved in an incident of accidental Legionella exposure, in order that medical advice can be given.

7.7.3 Occupational Health Provider

The School Occupational Health Provider will:

- carry out health surveillance/ health checks as agreed with the Human Resources department
- advise the affected employee(s) to attend their GP for referral onto specialists when necessary i.e. should a member of staff be involved in an incident of accidental Legionella exposure, in order that the necessary medical advice can be given, and treatment administered

7.7.4 All School Employees

- shall familiarise themselves and comply with this policy
- shall report any concerns to their line management and/ or the Site team relating to water systems or legionella risk
- shall not modify/ alter or make additions to water systems, unless approval is obtained from the 'Responsible person' via their head of faculty or business support
- shall attend all training deemed necessary and act on such training proactively

7.7.5 Students

• Shall report any concerns relating to water systems or legionella risk to their class teachers or senior management team. They can do this via the school reception.

7.7.6 **Contractors**:

Contractors will:

- ensure that any persons under their control i.e. employees, sub-contractors etc. that they instruct to work on the School's water systems will be suitably qualified, competent, with specific expertise on water systems, and that risk assessments, safe systems of work/method statements are in place prior to any works commencing, and that they operate in accordance with school health and safety standards, and all appropriate health and safety legislation.
- bring to the attention of the Site Team, any concerns that they may have with regards to the school's water systems e.g. dead legs, failure of a control measure, contaminated water system, legionella risk etc.

Other people working with or on behalf of the School are also required to comply with this Policy; failure to comply with this policy will mean immediate suspension of work activities until such time appropriate controls are in place.

8.0 **IDENTIFICATION AND ASSESSMENT OF THE RISK**

The School will employ suitably qualified and competent persons to carry out a legionella risk assessment of every building across the school campus. The assessment will comply with the BS 8580 2010 Water Quality, Risk Assessments for Legionella Control, Code of Practice and the HSE publication 'Legionnaires' disease: The control of Legionella bacteria in water systems, Legionella Approved Code of Practice (ACOP L8)'.

Reviews of risk assessments will take place when:

- there are changes to the water system or its use;
- there are changes to the use of the building in which the water system is installed;
- new information about risks or control measures becomes available;
- the results of checks indicating that control measures are no longer effective;
- a case of legionnaires' disease/ Legionellosis is associated with the system.

In new buildings, the School Trust should ensure that whoever designs, manufactures, imports or supplies water systems, that may create a risk of exposure to Legionella bacteria, so far as reasonably practicable;

- a) the water system is so designed and constructed that it will be safe and without risks to health, when used at work;
- b) provide adequate information for the user about the risk and measures necessary to ensure that the water systems will be safe and without risks to health when used at work.

This will take the form of a risk assessment which will be provided on practical completion of works or at handover of the project.

9.0 **CONTROLLING AND MONITORING THE RISK**

The School will employ suitably qualified and competent persons to implement a control and monitoring scheme for all potential sources of risk. The company employed will carry out assessment; monitoring and control as a member of the accredited body i.e. the Legionella Control Association. The Site team will maintain a logbook for all records of all monitoring checks and the control measures to be adopted.

Audits of the management system and associated records will be carried out annually by the current water hygiene service provider.

10.0 THE LEGIONELLA WRITTEN CONTROL SCHEME

The Legionella Written Control Scheme is a water management system which is set up to control the risk of exposure to legionella bacteria in the system. The scheme will specify the various control measures and how to use and carry out those measures. It will also describe the water treatment regimes and the correct operation of the water system plant. It will include the following information:

- risk assessment information
- a schematic drawing showing the layout of the water systems and their location within and around the premises
- the correct and safe operation of the system
- precautions in place to prevent or minimise risks associated with the system
- analytical tests, other operational checks, inspections and calibrations to be carried out, their frequency, and any resulting corrective actions
- remedial action to be taken in the event that the scheme is shown not to be effective, including control scheme reviews and any modifications made
- health and safety information including details on biocide, storage, handling, use and disposal of any disinfectant used in both the treatment of the system and testing of the system water
- Incident plan which covers the following situations:
 - major plant failure e.g. chemical system failure
 - very high levels or repeat positive water analyses for legionella

The Incident Management Plan and execution of the following situations, is the responsibility of the Crisis Management Group:

- an outbreak of Legionellosis, suspected or confirmed as being centred on a school campus
- an outbreak of Legionellosis the exact source of which has yet to be confirmed, but which is believed to be centred in an area which includes a school campus(es).

All of the School's academic, administrative and accommodation buildings have been subject to a legionella survey. This was undertaken to meet the requirements contained in the Legionella Approved Code of Practice (L8). The survey report includes records showing the details of the plumbing installations within each building, and there is an up to date schematic diagram showing the layout of the water systems and their location within and around the premises. From this information, a risk assessed, prioritised schedule of essential remedial works was produced.

The results of the survey are contained in the School Legionella Management Register. The information is held and maintained under the direct supervision of the Responsible Person.

The management system will hold the following information:

- temperature checks are carried out every half term (six weeks) at sentinel water points and 10% of all water outlets in every building across the site and the results recorded in a written log.
- risk Assessment for the system
- schematic diagrams of the system
- records of control checks taken
- chlorination record certificates
- records of any remedial work carried out
- programme of monitoring
- records of flushing showers and infrequently used water systems (particularly over the longer summer vacation).
- a written scheme for controlling the risk of exposure to Legionella
- COSHH data regarding any chemicals used for dosing water systems

11.0 THE LEGIONELLA WATER MANAGEMENT PLAN

In order to ensure the effective management of the risk presented by legionella, together with the need to maintain functional integrity of both hot and cold water systems, including storage, the School will operate a Legionella Management Plan.

The plan is a prioritised schedule of works developed from the risk assessments conducted of the School's water systems and has been developed from the latest legionella survey that has been undertaken. From the results of these, the Responsible Person has in conjunction with the specialist contractor developed a risk-assessed priority listing of works to be undertaken.

12.0 LEGIONELLA MANAGEMENT AUDIT

In addition to ongoing monitoring conducted by the Responsible Person, compliance with the requirements of this policy will be reviewed by members of the School Occupational Safety and Health office during the health and safety audit process.

13.0 TRAINING AND COMPETENCE

All appropriate staff will receive training and instruction commensurate with their level of responsibility where necessary from accredited training providers. Members of the Estates and Capital Development department staff, or other staff who are required to undertake duties which may bring them into contact with potential sources of infection, shall receive such information, instruction and training as required by the Responsible Person, based on the findings of the risk assessment. Legionella awareness training will be provided at least bi-annually or when there have been changes to the relevant legislation.

The content of the training will include familiarisation of the risks associated with legionella, safe operating procedures and the use of personal protective equipment.

The Responsible Person will identify appropriate levels of information, instruction and training for duty holders identified in this policy. Refresher training will be provided in accordance with departmental training requirements.

14.0 LINKED POLICIES/ RELATED DOCUMENTS

- Electricity at Work Procedure
- Hazardous and Dangerous Substances Procedure
- Health and Safety Policy
- Rules for contractors working on School sites
- BS 8580:2010 Water quality: Risk assessments for Legionella control
- BS8558:2011 Guide to the Design, Installation, Testing and Maintenance of Services Supplying Water for Domestic Use within Buildings and their Curtilages
- BS EN 806 (Parts 1-5) Specifications for installations inside buildings conveying water for human consumption.
- HSE publications:
 - Legionnaires' Disease Technical Guidance HSG274
 - Legionnaires' Disease ACOP L8
 - Legionnaires' Disease A brief Guide for Duty Holders INDG458

15.0 **RELEVANT LEGISLATION**

- Health and Safety at Work etc. Act 1974
- Management of Health and Safety at Work Regulations 1999
- Workplace (Health, Safety and Welfare) Regulations 1992
- Water Supply (Water Fittings) Regulations 1999
- The Water Supply (Water Quality) Regulations 2018
- Control of Substances Hazardous to Health Regulations 2002
- Electricity at Work Regulations 1989
- Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013