



Water Management Policy

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1.0 Introduction

This document sets out Our Lady of Walsingham CMAT (the Trust) procedures for managing water hygiene within its premises. The Trust recognises that it has a responsibility to protect employees and others against the risk of legionella infection (legionellosis) and scalding arising from plant, equipment, facilities, work or work related activities and that an effective water hygiene management plan needs to be in place to control the risks.

1.1 Relevant legislation and guidance

- Health & Safety at Work etc Act 1974
- Management of Health & Safety at Work Regulations 1999
- Control of Substances Hazardous to Health (COSHH) Regulations 2002
- Approved Code of Practice (ACOP) - LB — Legionnaire's Disease: The control of legionella bacteria in water systems
- Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR)
- Approved Code of Practice and Guidance (ACOP L8) 2013
- Water Regulations 1999
- British Standards 8580
- HSG 274 Technical Guidance

2.0 Water Hygiene Management Plan

The Water Hygiene Management Plan is designed to effectively control and minimise the exposure to legionella or similar bacteria related health risks to anyone working visiting or living within the Trust premises.

The plan includes details on how the Trust will:

- Assess the foreseeable risks from legionella
- Take action to manage the risk from legionella bacteria
- Identify Responsible Person/s
- Provide recommendations and guidance on control measures required to
- maintain hot and cold water systems
- Maintain appropriate records
- Review the management plan on a regular basis and adapt to meet any changing needs
- Execute emergency procedures, when legionella is found or suspected

The management plan applies to hot and cold water services only, and does not include swimming pools or whirlpool/spa baths for which Academies must ensure suppliers and contractors are suitably vetted and adequate risk assessments and procedures have been completed for these installations.

3.0 Responsibilities

3.1 Board of Directors

- Ensure adequate resources are provided and allocated to implement the Water Management Plan
- Ensure that relevant persons are adequately trained to perform their responsibilities

3.2 Approved Contractors

- Completing building surveys and risk assessments
- Inspecting all accessible parts of the systems for damage or contamination and notifying of remedial actions where required
- Disinfecting systems and ensure compliance with treatment regimes
- Provide records of all such inspections
- Advising the Site Manager of the outcome of inspections and areas of concern

3.3 Site Manager

- Assist the Headteachers
- Monitor changes / alterations in water services within premises and implications for legionella
- Ensure regular monitoring is being completed at premises
- Ensure designated persons are adequately trained to perform their responsibilities
- Notify Headteacher and other relevant staff of any issues that may arise through regular inspections
- Arrange for all premises to be competently risk assessed in sufficient detail to identify and assess the risk of legionella
- Ensure the necessary controls and precautionary measures are implemented

3.4 Headteacher

- Ensure that employees, customers, visitors and others are not exposed to legionella bacteria from their premises
- Seek professional advice when concerned that there could be a risk of exposure to legionella
- Ensure monitoring is being undertaken
- All records are maintained and kept in the premises log-book
- Notify relevant persons of any work undertaken on the water services using the relevant form of communication

3.5 Designated Person (Caretakers or similar)

- Flushing regime in premises at their prescribed period at least once weekly in accordance with weekly flushing regime (see Appendix 1)
- Disinfecting and de-scaling showerheads as required
- Recording the above on the monitoring forms provided
- Ensuring all information is kept up to date in the premises log-book

4.0 What is Legionella

Legionella bacteria are common and can be found naturally in environmental water sources such as rivers, lakes and reservoirs; it can also be found in other sources such as: cooling towers, hot and cold water systems, humidifiers, swimming pools, spa baths etc. Legionella bacteria can survive under a wide variety of environmental conditions; water temperatures in the range 20C to 45C seem to favour growth. The organisms do not appear to multiply below 20C and will not survive above 60C.

Legionella bacteria also require a supply of nutrients to multiply. Sources can include algae, amoebae and other bacteria. The presence of sediment, sludge, scale and other material within the system can provide favourable conditions in which the legionella bacteria may grow.



An example of biofilm



An example of build-up of sludge

Legionnaires disease is normally contracted by inhaling legionella bacteria, usually in tiny droplets of water (aerosols) contaminated with legionella, deep into the lungs. Person-to-person spread of the disease has not been documented.

The initial symptoms of Legionnaires' disease (Legionella pneumophila) include high fever, chills, headache and muscle pain. Patients may develop a dry cough and most suffer difficulty with breathing. About one third of patients infected also develop diarrhea or vomiting and about half become confused or delirious. The incubation period is between 2 — 10 days (usually 3 —6 days).

5.0 Risk Assessment

A risk assessment is regularly (every three years or if a major event/change occurs) undertaken, by external contractors, for all water systems within the Trust premises to determine the level of risk from legionella. A number of factors required to acquire Legionellosis has been considered when undertaking the risk assessment, such as:

- Water temperature
- Water stagnation
- Potential for aerosol formation
- Heat gain/loss potential
- Condition of water
- Condition of the water service and water system as a whole
- The susceptibility of exposed persons
- The population density of exposed persons

The risk assessments are completed by approved specialist contractors on a 2-yearly basis. Copies of the risk assessment are kept in the premises log-books for each individual site; soft copies are also kept by the Site Manager.

In compliance with ACOP L8, the risk assessments are reviewed every two years or whenever there is reason to believe the original assessment is no longer valid for example:

- Where there have been changes to plan, the water system or its use
- Where there have been changes to the use of building, such as a change to the customer profile, reduction in use etc
- Where new information about risk control or control measures have become available
- Where monitoring indicates that control measures are no longer effective

In any of the above circumstances, the Site Manager must be notified to ensure that the risk assessment and schematic drawings are updated to reflect the current situation.

Schematic drawings are required as part of the risk assessment and must include all water systems, this should also include an asset register of all associated plant and equipment.

The schematic drawing should be a current diagram showing the layout of the plant and systems, including parts temporarily out of use. Each item of plant must have a unique number and the drawing is to indicate the items of plant and the associated unique number.

6.0 Premises Log Book

The premises log-books must be maintained on site at all times and contain the following information:

- Most recent risk assessment
- Schematic drawing of the water system
- Monitoring records by contractor
- Monitoring records by designated person
- Any work completed on the water system
- Training records

This must be made available at all times by anyone that may require this information, such as the Site Manager or contractors.

7.0 Scheme of Control

The risk from the exposure will normally be controlled by measures, which do not allow the proliferation of legionella bacteria in the system and reduce exposure water droplets and aerosols.

Control measures will generally include the following precautions where appropriate:

- Controlling the release of water spray
- Avoid water temperatures of between 20C and 45C
- Avoid water stagnation, which may encourage the growth of bio-film
- Avoid the possibility of materials which provide a harbour or nutrients which encourages the multiplication of bacteria e.g. dead vermin, birds, wood etc. which can fall into open water tanks
- Avoid use of materials in systems that can harbour or provide nutrients for bacteria and other organisms
- Keeping systems clean to avoid the build-up of sediments which may harbour bacteria
- The use of suitable and safe water treatment programmes
- Effective monitoring and management systems which ensure the correct and safe operation together with effective maintenance of water systems

Relevant legislation and guidance

- Health & Safety at Work etc Act 1974
- Management of Health & Safety at Work Regulations 1999
- Control of Substances Hazardous to Health (COSHH) Regulations 2002
- Approved Code of Practice (ACOP) - LB — Legionnaire's Disease: The control of legionella bacteria in water systems
- Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR)
- Approved Code of Practice and Guidance (ACOP L8) 2013
- Water Regulations 1999
- British Standards 8580
- HSG 274 Technical Guidance
- Other guidance specifically concerning periods of inactivity such as lengthy close down

Water Hygiene Management Plan

The Water Hygiene Management Plan is designed to effectively control and minimise the exposure to legionella or similar bacteria related health risks to anyone working, visiting or living within the premises.

- Every three years, "Legionella Risk Assessment"
- Weekly flushing of 'little usage outlets', as indicated on the site map, site Caretaker
- Regular flushing of all outlets after a period of inactivity, e.g. ½ terms, site Caretaker
- Monthly flushing of all hot and cold outlets, site Caretaker
- Monthly hot water temperatures at all relevant outlets, site Caretaker
- Yearly TMV servicing, currently Imtech Inviron
- Yearly water sampling & disinfection, currently Jordan Environmental
- 6 monthly outlets descaling, site Cleaning Team
- 3 monthly showers descaling and disinfection, site Caretaker
- Yearly water temperatures, currently Jordan Environmental
- Hot and cold water storage disinfection and cleaning, "one off" when needed, but likely annually
- Yearly inspection of pipework, as far as reasonably practicable, by Site Manager

Cold Water Services

- Run the tap at a moderate flow to minimize spray
- Take temperature reading of the water after 2 minutes
- Record temperature on monitoring form
- Temperature to be below 20°
- Little usage outlets flushed for 2 minutes

Hot Water Services

- Run the tap at a moderate flow to minimize spray
- Take temperature reading of the water after 1 minute
- Record temperature on monitoring form
- Temperature to be at least 50° at the TMV
- Little usage outlets flushed for 2 minutes
- Check that water is stored at a temperature of at least 60°

Cleaning and Disinfection

Hot and cold water services should be cleaned and disinfected in the following situations:

1. If routine inspection shows it to be necessary, such as showers
2. If the system or part of system has been substantially altered
3. After a long period of inactivity

Sampling and Testing for Legionella

HSE guidance (ACOP L8) does not recommend routine sample for legionella other than in specific circumstances, and lists the following requirements for particular system where routine testing should be undertaken:

- Where water distribution temperatures are reduced and biocides are used to control bacteria growth — monthly sampling
- Where biocide or temperature levels are out of control — weekly sampling until system is back in control
- Where a Legionella outbreak is suspected
- Hospital wards

The complexity of the system will determine the number of samples taken but should never be less than 2 samples of cold water and 2 samples of hot water.

7.1 Temperature Regime

This is the most traditional approach to legionella control and is the general approach used by the Trust. Hot water should be stored at 60C and distributed so that it reaches a temperature of 50C within one minute at outlets. Care is needed to avoid a much higher temperature because of the risk of scalding.

Where a significant scalding risk has been identified, the use of thermostatic mixing valves (TMV's) on baths and taps must be considered to control the temperature down to a safe level for the user group.

Monitoring of water temperatures should be carried out as stated in the regime or sooner if the premises risk assessment has identified the need.

7.2 Cold Water Services

Monitoring of the cold water services must be carried out monthly by the designated person, and will include:

- Check tap is in clean working condition i.e. no scale
- Run the tap at a moderate flow to minimize spray
- Take temperature reading of the water after 2 minutes
- Record temperature on monitoring form

Temperatures above 20C should be reported to the Site Manager.

7.3 Hot Water Services

Monitoring of the hot water services must be carried out monthly by the designated person, at the sentinel points, the monitoring will include:

- Check tap is in clean working condition i.e. no scale
- Run the tap at a moderate flow to minimize spray
- Take temperature reading of the water after 1 minute
- Record temperature on monitoring form

Temperatures below 50C should be reported to the Site Manager (unless controlled by TMV's - see below)

7.4 Thermostatic Mixer Valves (TMV's)

Where fitted, the input hot water temperatures to thermostatic mixer valves should be at least 50C Within a minute of running the water. Outlets with TMV's should be monitored on a sentinel basis (nearest and furthest outlet). The temperature should be taken with an appropriate surface thermometer to ensure a more reliable reading. An example of where the temperature should be taken can be found below:



7.5 Service Flushing

Water services identified as being used infrequently i.e. less than weekly; should be placed on a weekly flushing regime, such as taps, toilets, outside taps, showers, water fountains etc. Taps, which are not working, must be reported and repaired immediately.

Before carrying out a flushing regime, consideration should be given to removing infrequently used showers, taps or water fountains. Once removed, the redundant pipe work should be cut back, as far as possible to prevent a dead leg from being introduced.



7.6 Other control programmes

Other treatment and control programmes used in controlling legionella can include:

- Chlorine Dioxide
- Biocide treatments
- Ionisation regime

- Ozone treatment
- UV treatment

The above measures can only be used within the Trust premises under the direct advice and supervision of specialist contractors once the Site Manager and Premises Responsible Person have been notified and a safe system of work has been implemented.

7.7 General Monitoring

All water services should be routinely checked for temperature, water demand and inspected for cleanliness and use, this will allow for early detection of problems in maintaining the control regime.

All information should be recorded on the relevant site monitoring sheets. The use of a digital water type thermometer with a touch and immersion probe is recommended to ensure a more accurate read, which can be purchased through procurement.

Any work carried out on the plant must be recorded and the schematic drawing updated with the risk assessment.

Where it is difficult to carry out weekly flushing e.g. if the premises is closed for more than a week, the stagnant water from within the shower/tap and associated dead legs needs to be purged to drain before the appliance is used. It is important that this procedure is carried out with the minimum production of aerosols i spray, e.g. additional piping may be used to purge contaminated water into a drain.

To avoid the risk of Legionellosis, precautions must be taken to avoid the creation of aerosols.

8.0 Cleaning and Disinfection

Hot and cold water services should be cleaned and disinfected in the following situations:

1. If routine inspection shows it to be necessary, such as showers
2. If the system or part of system has been substantially altered

It is essential that the risks have been assessed to identify the most appropriate type of disinfection suitable to the type of premises and the people using the services. A system must be in place to ensure all people are excluded from the water services while disinfection is undertaken to avoid any possible risk of chemical ingestion or scalding.

Advice should be sought by your Site Manager and Health and Safety Advisor.

9.0 Sampling and Testing for Legionella

Routine sampling and analysis of hot and cold water systems for legionella bacteria is not recommended as a control measure under normal circumstances. HSE guidance (ACOP L8) does not recommend routine sample for legionella other than in specific circumstances, and lists the following requirements for particular system where routine testing should be undertaken:

- Where water distribution temperatures are reduced and biocides are used to control bacteria growth — monthly sampling
- Where biocide or temperature levels are out of control — weekly sampling until system is back in control
- Where a Legionella outbreak is suspected
- Hospital wards

The complexity of the system will determine the number of samples taken but should never be less than 2 samples of cold water and 2 samples of hot water.

10.0 Actions in the event of an emergency (outbreak of Legionellosis)

In an emergency where an outbreak of legionella is suspected or confirmed the Site Manager and Health & Safety Advisor must be informed immediately.

If legionella bacteria is confirmed, the relevant form must be completed as by RIDDOR 2013 requirements, see appendix 2.

11.0 Information and Training

It is the responsibility of the Premises Responsible Person to ensure that appropriate records are recorded in the premises log-book at all times, including details of:

- The written scheme and details of its implementation
- Results and dates of any monitoring, inspections, tests or checks carried out, and the dates. This should include details of the state of operation of the system, i.e. in use, after a period of infrequent use or out of use

It will be the responsibility of the Site Manager in conjunction with the Premises Responsible Person to ensure that relevant staff attends this training. All training must be recorded and retained.

Appendix 1

	Water Management Schedule of Checks						
	Hot Water Services	Cold Water Services	Calorifiers	Showers	TMV	Little used Outlets	Cold Water Tanks
Annually			water samples taken, inspect internally and drain if needed		clean and descaling		visually inspect, check for temperatures, lower than 20° at inlet
3 Monthly				clean, descale & disinfect			
Monthly	Temperature check: minimum of 50° within 1 min	Temperature check: below 20° within 2 mins	Temperature check: flow at least 60°, return at least 50°				
Weekly						Flush for 2 mins and purge to drain, no release of aerosols	
Legend:	Subcontractors	Site staff					