St Chad's College
Durham

Legionella Management Plan

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Contents

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Circulation

This Policy is made available to all staff and students via the St Chad's College website.

A copy of Appendix 1 will be displayed on the Health and Safety notice board and a printed copy will be kept in the Finance & Operations Director's office.

Relevant Statutory Instruments

- The Health & Safety at Work Act 1974
- The Management of Health & Safety at Work Regulations 1999
- The Control of Substances Hazardous to Health Regulations 2002
- The Water Supply (Water Fittings) Regulations 1999

Applicable Approved Codes of Practice and Other Guidance

- L8 Legionnaires' disease: The control of Legionella bacteria in water systems, Approved Code of Practice and guidance on regulations
- HSG274 Part 2 Legionnaires' disease: The control of legionella bacteria in hot and cold water systems
- HSG274 Part 3 Legionnaires' disease: Technical guidance, the control of legionella bacteria in other risk systems

Terminology

Acronym	Explanation
L8	L8 Legionnaires' disease: The control of Legionella bacteria in water systems, Approved Code of Practice and guidance on regulations
LRA	Legionella Risk Assessment
LSMS	Legionella Safety Management System
DWS	Domestic Water System: installed hot and cold water system serving domestic usage outlets, i.e., taps, showers, WC's etc. The system may also comprise, storage, water heating assets, pumping and expansion infrastructure.
DHWS	Domestic Hot Water System: as above but applicable to the hot water parts of the system only
DCWS	Domestic Cold Water System: as above but applicable to the cold water parts of the system only
CWST	Cold Water Storage Tank
TMV	Thermostatic Mixer Valve
WRAS	Water Regulations Advisory Service
LMP	Legionella Management Plan
SOP	Safe Operating Procedure

Introduction

The following document details the 'Written Scheme' for the management of Legionella bacteria within the domestic and specialist, hot and cold water systems, across the College's estate. It details the roles, responsibilities and methodologies the College will employ, to comply with the requirements of L8 *Legionnaires' Disease: The Control of Legionella Bacteria Approved Code of Practice* (L8). It should be read in conjunction with the series of *Safe Operating Procedures* (SOPs) detailed below.

The bacterium Legionella Pneumophila, and other related bacteria, are naturally occurring and can be found in environmental water courses, such as streams, reservoirs, etc., where their number is low. The bacterium also occurs in man-made water systems. Due to the enclosed nature of these systems, and the reduced nature of water flow compared to natural water courses, there is an increased likelihood for the conditions that result in bacterial growth or proliferation. Exposure to Legionella bacteria may lead to Legionellosis, a group of diseases of which the most well-known is Legionnaires' disease.

It should be noted that Legionellosis infection occurs only by inhalation of water droplets containing the Legionella Pneumophila bacteria. Therefore, the College undertakes to ensure all systems, that have the potential to generate airborne water droplets, e.g., showers, taps, spray taps etc., will be subject to monitoring and control. In addition, all conditions that may give rise to Legionella bacteria proliferation, within College's water systems, will be subject to the requisite control methodologies.

As both employer and legal Duty Holder, the College will discharge its legal and moral obligations by the organisational arrangements detailed within this document and associated SOPs.

Aims and Objectives

The aim of the Legionella Safety Management System (LSMS), detailed within this document, is to prevent the exposure of students, staff, contractors and/or visitors to Legionella bacteria. To achieve this, the College will:

- Identify, establish and implement specific roles and responsibilities for the management of Legionella bacteria within water systems.
- Ensure that every building/site, within the estate, that houses a domestic or specialist hot/cold water system, is subject to suitable and sufficient risk assessment.
- Establish and implement thermal control systems for all domestic hot and cold water systems.
- Identify, establish and implement suitable control processes, for each specialist system, to be undertaken at intervals, as identified in HSG274 Part 3 Legionnaires' Disease: The control of legionella bacteria in other risk systems.
- Establish and implement procedures for drain/blow-down, inspection and treatment, as required, of water system assets, as identified in HSG274 Part 2

Legionnaires' Disease: The control of legionella bacteria in hot and cold water systems.

- Identify, establish and implement suitable and sufficient processes for mechanical maintenance of water system assets, to ensure required operational levels and cleanliness.
- Identify, establish and implement processes for control and remediation in the event of a failure in thermal control regimes.
- Identify, establish and implement processes for the design of new water systems to ensure suitable and sufficient thermal control and minimise the potential for heat loss/gain.
- Identify, establish and implement processes for the appropriate design, and ongoing maintenance, of new water systems, as required, for Water Regulations Advisory Service (WRAS) fluid categories 2 to 5.
- Identify, establish and implement processes for the communication of changes to domestic and specialist water systems, to relevant key stakeholders.
- Identify, establish and implement processes for the appropriate commissioning of new and altered water systems.
- Identify, establish and implement procedures for a potential outbreak event.

Roles and Responsibilities

The Governors of St Chad's College are the legal Duty Holder and have ultimate responsibility for compliance with the requirements of L8. While responsibility is retained by the Governors, the requisite duties to fulfil Duty Holder responsibilities are delegated, by the **Principal** to the **Finance & Operations Director.**

It recognised that successful Legionella management will entail coordination and cooperation of a number of departments within St Chad's College. The College maintains an expectation that other departments will fully assist the Finance & Operations Director, to enable a full discharge of Duty Holder responsibilities.

Finance & Operations Director

The Operations Director is responsible for:

- Ensuring systems are enacted, to enable compliance with L8 and guidance on regulations, are identified, established and implemented.
- Ensuring the establishment and maintenance of domestic water systems and, where relevant, other risk systems, that deliver water in a safe and healthy manner.
- Ensuring managers are informed and empowered to deliver Legionella management systems
- Ensuring adequate time and resources are provided to fulfil Duty Holder responsibilities and the requirements of the Legionella Management Plan (LMP).
- Reviewing performance against, and conformity to, the LMP.
- Reporting performance outcomes to the College Officer team.
- Ensuring resources are appropriately allocated for Legionella management, within their areas of control.

- Ensuring staff receive appropriate training, instruction and information, to fulfil their Legionella-related duties.
- Ensuring Legionella hazard is predetermined as a prerequisite for any contracted capital works projects involving water systems.
- Ensuring the LMP is reviewed, to established guidelines.

- **Facilities Manager**

The Facilities & Housekeeping Manager is responsible for:

- Overseeing Legionella management processes.
- Overseeing and implementing Legionella Risk Assessment (LRA) and risk assessment review programs, including remedial measures, as identified.
- Overseeing inspection and maintenance programmes, including remedial measures as required/identified, for hardware and assets, i.e., cold water storage tanks, buffer vessels, calorifiers etc., including specialist water or other risk systems, where relevant.
- Ensuring new acquisitions to the estate are subject to LRA, inspection and thermal control regimes.
- Implementing LSMSs, within areas of their control.
- Ensuring Legionella hazard is predetermined as a prerequisite for any contracted works involving water systems.
- Ensuring systems are in place for the adequate design and commissioning of new and/or altered water systems to mitigate Legionella hazard.
- Ensuring individuals are nominated to undertake thermal control checks.
- Ensuring the local delivery of thermal control regimes.
- Ensuring the delivery of hygiene processes, flushing, showerhead disinfection and descale etc.
- Ensuring independent water systems, other risk systems and assets, e.g., fountains, are subject to appropriate monitoring and cleansing regimes as detailed in HSG274 Part 3.
- Ensuring all local and College recording processes are completed, as required.
- Ensuring all identified thermal control failures are reported for remedial action.
- Ensuring all identified failures in management systems for other risk systems are reported for remedial action, as required.

MW Legionella Compliance, Appointed Competent Contractor (Water Hygiene Consultant)

The appointed Water Hygiene Consultant is responsible for:

- Informing the College regarding any limitations in their capabilities, qualifications, competence and/or knowledge, which may impact their ability to undertake any Legionella control task/works, as instructed by the Facilities Manager.
- Undertaking LRAs across the estate, as instructed.
- Undertaking cold water storage tank (CWST) inspection, as instructed.
- Undertaking calorifier blow-down and inspection, as instructed.
- Undertaking inspection of combi-boiler header tanks and disinfection, as required/ instructed.

- Undertaking disinfection and other remedial processes, as instructed.
- Identifying and producing testing record templates, as required.
- Complying with all College recording processes, as required.

Maintenance Team Staff

Maintenance Team staff (nominated persons) are responsible for:

- Delivering thermal control checks, as required.
- Delivering flushing and showerhead/disinfection, as required.
- Completing all local and College recording processes, as required.
- Reporting control failures for remedial action, as required.
- Highlighting minor water system alterations, e.g., dead end/leg producing works, to the Facilities & Housekeeping Manager.
- Undertaking Legionella control-related training, as required.
- Not undertaking any alterations to water systems without informing the Facilities & Housekeeping Manager.

Housekeepers

Housekeepers are responsible for:

- Identifying rooms or properties that are vacant for more than 7 days and informing the Facilities & Housekeeping Manager in order to conduct flushing.
- Ensuring that the housekeeping team assist in the flushing of vacant rooms when required, at the direction of the Facilities & Housekeeping Manager

Risk Assessment

All buildings containing domestic, or other risk systems for water, will be subject to a LRA, instructed by the *Facilities Manager* and undertaken by a competent contractor holding the relevant qualifications and experience. LRAs will be made available to the *Facilities & Housekeeping Manager* and are subject to review on a risk prioritised basis. However, review will be immediately triggered in the event of:

- substantial physical change to water systems, or use of the building, which may impact water usage or increase the potential for proliferation of legionella bacteria
- sustained failure of thermal control processes
- a Legionella outbreak

Remedial measures, identified as part of the LRA process, will be scheduled for action on a risk priority basis.

Hot and Cold Domestic Water Systems

Domestic water systems (DWS) pertain to any building, within the College estate, containing a hot and/or cold water supply, fed directly from a mains supply or cold water storage tank, leading to outlets such as taps, shower heads, etc. Boilers, point of user water heaters, plate

heat exchangers, calorifiers, buffer vessels, expansion vessels and thermostatic mixer valves (TMVs) are also considered to be part of the DWS.

All DWS will be recorded via a schematic diagram and subject to thermal control regimes, in addition to relevant inspection and hygiene processes, including flushing. Any change to a DWS will require the schematic to be reviewed and updated accordingly.

Thermal Control

Thermal control is the principal Legionella control methodology, employed by the College, in relation to DWS. There are currently no DWS, within the estate, controlled by biocide treatment, UV or other non-thermal methodology.

To mitigate the risk from Legionella bacteria, its proliferation needs to be prevented. Legionella bacterium proliferate at the optimum temperature range of 20 to 50°C; below 20°C, the bacteria survive but do not proliferate; between 50 and 60°C, the bacteria may survive for one to two hours but will not proliferate; and above 60°C, the bacteria die within a few minutes. Therefore, to achieve thermal control of its DWS, the College will maintain temperatures within the following control ranges:

- Cold water equal to or below 20°C.
- Hot water equal to or above 50°C.

Due to the length of domestic hot water systems (DHWS), and the potential for heat loss through the pipework, to ensure water at the outlet reaches 50°C, outflow from the calorifier will be maintained at a minimum of 60°C. The College will take all reasonable measures, to mitigate heat loss to the DHWS and heat gain to the domestic cold water system (DCWS), including: system routing design; ensuring blended pipe runs are less than two metres in length; and appropriate lagging techniques.

To ensure and confirm these temperatures ranges are being maintained, the College will undertake a regime of thermal control checks and testing, including:

- Testing of cold water temperatures from all sentinel taps and a representative sample of other outlets on a monthly basis. Representative outlets will rotate to ensure all outlets have been captured on an annual basis. Only temperatures of 20°C, or less, will be deemed acceptable.
- Testing of hot water temperatures from all sentinel taps and a representative sample of other outlets on a monthly basis. Representative outlets will rotate to ensure that all outlets have been captured on an annual basis. Only temperatures of 50°C, or above, will be deemed acceptable.
- Testing of calorifier outflow and return temperatures on a monthly basis. Only a flow temperature of 60°C, or above, and a return of 50°C, or above, will be deemed acceptable.
- Testing of hot water temperature as it enters TMVs, where only a pre-TMV temperature of 50°C, or above, will be deemed acceptable.

Delivery of thermal control checks and testing will be by nominated College staff (Maintenance Team). Completion of thermal control testing will be monitored, to ensure compliance and regime failures are reported for remedial action.

All thermometer probes used for monitoring regimes will be subject to annual calibration.

Water Systems Hygiene

It is recognised that naturally occurring calcium, magnesium, sediments and deposits may occur within water systems. These may act as nutrients/colonisers and, particularly in conjunction with standing water, result in a potential for scale, algal growth and production of biofilms, which may aid the proliferation of Legionella. To mitigate this and support thermal control regimes, the College will employ a number of hygiene systems, including:

- Annual inspection of cold water storage tanks (CWSTs), with remedial clean and disinfection, if/as required. N. B there are currently no CWSTs in the estate.
- Annual inspection of combi-boiler and fortic header tanks, with remedial clean and disinfection, if/as required.
- Annual calorifier blow-down and inspection, with remedial clean and disinfection, if/as required.
- Quarterly descale and disinfection of domestic showerheads.
- Weekly flushing of infrequently used outlets.
- Annual purging of expansion vessels.
- The identification and removal of dead ends/legs within the water system.
- Inspection and disinfection of CWSTs, combi-header tanks and calorifiers will be undertaken by an appointed, competent contractor.

Action in the Event of a Failure of Thermal Control

Any temperature tests falling outside the thermal control range will be deemed a failure of the system. Where such failures occur, the College will implement remedial measures to ensure correct control ranges are restored. Dependent on the severity of failure and whether it is sustained, multiple measures may be employed either concurrently, consecutively or in sequence, including:

- Turnover of any applicable CWST.
- Raising the stored water temperature of any applicable calorifier.
- Sampling for colony forming units of Legionella.
- Disinfection.
- Physical alteration to the DWS, to improve flow, heat loss or gain etc.
- Increase in temperature testing.

All measures employed will be maintained until temperatures fall within the required control range.

Design of New Water Systems

The College will ensure the design of all new DWS, including alteration to existing systems, supports effective thermal control and mitigates the collection of nutrients, including:

- Design prevention of heat loss to hot water systems.
- Design prevention of thermal gain to cold water systems.
- Blended pipe runs to be less than two metres.
- Installation of flow through/dual flow expansion vessels in favour of single flow.
- Access to TMVs for maintenance purposes.
- Installation of mains fed systems, in preference to CWST fed, where practicable.
- Minimising stored cold water to the capacity required, to meet peak demand only.
- Avoiding or, where impracticable to do so, limit dead legs.
- Installing WRAS approved pipework, in line with The Water Supply (Water Fittings) Regulations 1999.
- Applying the principle of Safe by Design, via risk assessment as required.

No new or altered DWS will be rendered operational without full commissioning, including a purge and flush of the system followed by disinfection. Commissioning will be witnessed by the College representative managing the project, with certification received and evidenced prior to the system entering use.

Where practicable alteration/upgrade to water systems will include the removal of dead legs/ends, as part of the project or program.

Training & Competence

All College staff, with an active role in Legionella management, will receive training commensurate to their duties and responsibilities.

The following matrix provides an overview of the training requirements stipulated by the College:

Group	BOHS P901	Operational Temperature Testing	Online Legionella Awareness.
Finance & Operations Director			Refresh every 3 years
Facilities & Housekeeping Manager	No refresh required	Refresh every 1 year	Refresh every 3 years
Maintenance Team		Refresh every 1 year	Refresh every 3 years
Housekeepers			Refresh every 3 years

Contractor Competencies and Selection

All contractors, undertaking Legionella management tasks on behalf of the College, will, as a minimum hold:

- Current membership of the Legionella Control Association.
- Relevant qualifications in the area of management control undertaken, i.e., CoC Legionella, risk assessment, inspection, sampling, disinfection etc. All qualifications to be accredited via appropriate recognised organisations, i.e., BOHS, City &Guilds etc.
- All on-boarding of contractors will be subject to procurement systems, to ascertain contractor management and performance monitoring systems for health and safety. For delivery of inspections, disinfections, etc., all works will be subject to the acceptance of suitable and sufficient risk assessments and method statements (RAMS).

Monitoring and Review

The Finance & Operations Director will monitor performance against this written scheme, including:

- Sample and review of LRAs, to identify completion for building(s) in question, with evidence of recommended remedial actions having been, or actively in the process of being closed, via auditable records.
- Ongoing review of testing records across the estate, to ensure evidential and successful completion of routine monthly testing, as identified in Section 7: Thermal Control.
- Ongoing review of records for hygiene systems, to ensure evidential and successful completion of weekly flushing, quarterly showerhead descales/disinfections, statutory inspections of assets, with remedial actions as required, as detailed within section 8: Water System Hygiene.
- Review of all third party arrangements, to ensure ongoing compliance and highlight areas for College action.

Additional review will be carried out Worknest, the College's appointed Health & Safety consultant.

Appendix 1 - Safe Operating Procedures

The following safe operating procedures (SOP) cover all risk control systems for DWS, undertaken by College staff, within the Maintenance Department. Those management systems undertaken by appointed hygiene contractors will conform to procedures defined by the contractor and compliant with the LMP.

These cover:

- Monthly Outlet Temperature Monitoring
- Calorifier Temperature Monitoring
- Disinfection and Descale of Showerheads
- Flushing of Infrequently Used Outlets
- Thermostatic Mixer Valve Monitoring
- Legionellosis Outbreak Procedure

Monthly Outlet Temperature Monitoring

Objective

Monthly temperature monitoring of sentinel and indicated representative sample outlets within nominated areas for compliance with L8 and conformance to the College's Legionella Management Plan, ensuring:

- DWS remain at suitable temperatures to control bacterial growth.
- Hot taps achieve at least 50^{o}C, within one minute of running.
- Cold taps achieve 20^{o}C, or below, within two minutes of running.

Equipment Required

- Digital probe thermometer (with liquid and surface probes).
- List of designated outlets (Legionella spreadsheet).
- Watch/clock.

Care of Equipment

- Keep thermometer unit dry, and store in a safe dry location.
- Change thermometer battery, as required.
- Digital thermometer should be calibrated annually.

Procedure

- Obtain list of tasks from Facilities Manager.
- Turn each tap to be monitored on, one at a time. DO NOT turn multiple taps on simultaneously. Ensure a steady flow of water is achieved, without excessive splashing.
- As soon as a steady flow is achieved, place the thermometer's liquid probe into the water stream and commence timing. Record the temperature when the reading becomes stable or when the time limit has been reached.
- Hot taps must achieve at least 50^{o}C within one minute of running.
- Cold taps must be 20^{o}C, or below, within two minutes of running.
- Record temperatures on the Legionella monitoring record sheet and then pass to Facilities Manager to record in the Legionella monitoring record spreadsheet (S:\Compliance\Statutory Safety Checks\Legionella\2022)
- Where temperatures fail, log the outlet (giving its location) on Quadpro for rectification.
- Reoccurring failures must be reported immediately to the Facilities Manager so corrective action can be taken.
- Ensure any spillages are cleared and the area left dry.

Calorifier Temperature Monitoring

Objective

Monthly temperature monitoring of calorifier flow and return temperatures, within nominated areas for compliance with L8 and conformance to the College's Legionella Management Plan, ensuring:

- Hot water systems remain at suitable temperatures to control bacterial growth.
- Calorifier outflow temperatures are maintained at 60°C.
- Calorifier return temperatures are maintained at 50°C.

Equipment Required

- Digital probe thermometer (with surface probe).
- Pen/pencil.
- List of calorifiers (Legionella spreadsheet).

Care of Equipment

- Keep thermometer unit dry, and store in a safe dry location.
- Change thermometer battery, as required.
- Digital thermometer should be calibrated annually.

Procedure

- Obtain list of tasks from Facilities Manager.
- Ensure the calorifier to be monitored can be safely accessed.
- Place the thermometer surface probe on the calorifier outflow pipework, adjacent to the take-off from the vessel. Record the temperature when the reading becomes stable.
- Hot feed pipework must achieve at least 60°C.
- Place the thermometer probe adjacent to the hot water return to the vessel. Record the temperature when the reading stabilises.
- Hot return pipework must achieve at least 50°C
- Record temperatures on the Legionella monitoring record sheet and then pass to Facilities Manager to record in the Legionella monitoring record spreadsheet (S:\Compliance\Statutory Safety Checks\Legionella\2022)
- Reoccurring failures must be reported immediately to the Facilities Manager so corrective action can be taken.
- Leave the work area tidy

Disinfection and Descale of Showerheads

Objective

Quarterly disinfection and descale of showerheads (and hoses, where applicable), within nominated areas for compliance with L8 and conformance to the College's Legionella Management Plan, ensuring:

- Minimisation of scale, which may harbour legionella bacteria.
- Disinfection and removal of potential nutrients, which may enable proliferation.

Equipment Required

- Personal protective equipment (PPE), eye protection, protective gloves (See COSHH Risk Assessment).
- Floor warning signs and, where appropriate, wall ones too.
- The recommended descale agent (Showerhead Plus) or similar approved product, to remove lime scale and disinfect.
- Non-abrasive cloth and bucket.
- Depending on shower type, basic tools may be required to remove shower head, e.g., adjustable spanner, allen key.

Procedure

- Obtain list of tasks from Facilities Manager.
- Ensure you are wearing the appropriate PPE (protective clothing if standard work wear does not cover exposed areas of skin, eye protection, gloves (See COSHH Risk Assessment).
- Display warning signage, including wall hanging signage, as required.
- Ensure the area can be, and is, adequately ventilated.
- Prepare descaling solution in a clean bucket, three parts water to one part chemical for Showerhead Plus (the chemical can be used undiluted for particularly scaled shower heads). Use in accordance with manufacturers guidelines/COSHH assessment for alternative products.
- Remove showerhead (and hose, as applicable) and place carefully into the bucket containing the solution.
- Soak the showerhead and hose for 5-10 minutes, or until the limescale has been removed. If required rub the showerhead with a non-abrasive cloth, to assist in scale removal.
- Remove showerhead and hose from the bucket and dry off any excess solution.
- On completion, refit showerhead and hose and flush thoroughly with fresh water.
- Record works as complete on Legionella monitoring spreadsheets and complete the monitoring confirmation questions on the Legionella Compliance form on Teams.

Note:

- Showerhead Plus is dark orange in colour and contains a dye which will change to blue/green when the solution is no longer active against scale, therefore solution should be changed.
- All descaling and cleaning products must be used in accordance with the COSHH risk assessment for the product.
- Dispose of any wastewater safely and in accordance with environmental protection guidance.

Flushing of Infrequently Used Outlets

Objective

Weekly flushing of identified, infrequently used outlets, within nominated areas for compliance with L8 and conformance to the College's Legionella Management Plan, ensuring:

- The minimisation of stagnation within DWS, which may result in the proliferation of Legionella bacteria.
- The turnover of stored water, as required or where general usage fails to achieve stored water turnover within 24hrs

Equipment Required

- List of little used outlets (Legionella spreadsheet).
- Thermometer.

Procedure

- Obtain list of tasks from Facilities Manager.
- Turn tap on for a steady flow of water.
- Flush outlet for two minutes, which should give a temperature comparable to the temperature of frequently used outlets supplied from the same system. Minimise production of aerosol while flushing, e.g. remove showerhead from hose during flushing or do not turn tap on full to minimise splashing.
- For indoor flushing, ensure excess water has been removed and the area is left clean and dry.
- Record works as complete on Legionella monitoring spreadsheets and complete the monitoring confirmation questions on the Legionella Compliance form on Teams.

Note:

- It may be possible to use additional hoses or piping etc. to minimise spray.
- Flushing should be carried out with no other person present.

Thermostatic Mixer Valve Monitoring

Objective

Monthly hot and cold water feeding TMV temperature monitoring for compliance with L8 and conformance to the College's Legionella Management Plan, ensuring:

- Hot water feeds to TMVs remain at suitable temperatures to control bacterial growth.
- Hot supplies at the TMV should achieve at least 50°C within one minute of running.
- Mixed flow at the outlet should be between 38 and 42°C within two minutes of running.

Equipment Required

- Digital probe thermometer (with liquid and surface probes).
- Pen/pencil.
- List of TMV outlets (Legionella spreadsheet).
- Watch/clock.

Care of Equipment

- Keep thermometer unit dry, and store in a safe dry location.
- Change thermometer battery, as required.
- Digital thermometer should be calibrated annually.

Procedure

- Obtain list of tasks from Facilities & Housekeeping Manager.
- Turn outlet on until a steady flow of water is achieved, without excessive splashing.
- Using the digital thermometer fitted with the surface probe, take reading as close as possible to the hot and cold water feeds to the TMV.
- Hot supplies at the TMV should achieve at least 50°C within one minute of running.
- Cold supplies at the TMV should be below 20°C within two2 minutes of running.
- Using the digital thermometer with the liquid probe take the temperature of the water stream and record when the reading becomes stable.
- Mixed flow at the outlet should be between 38 and 42°C within two minutes of running.
- Record the three temperatures and time on monitoring record sheet and then pass to Facilities Manager to record in the Legionella monitoring spreadsheet (S:\Compliance\Statutory Safety Checks\Legionella\2022).
- If temperatures fail, then a retest, at a later date and time, must be carried out.
- Recurring failures must be reported immediately to the *Facilities & Housekeeping Manager* so corrective action can be taken.

After finishing your work:

- ✓ Ensure all work areas are left tidy and dry.
- ✓ Transfer temperature readings to master copy, via *Facilities & Housekeeping Manager*.

- ✓ Remember to ALWAYS report out-of-range results from any outlet.

Legionellosis Outbreak Procedure

Objective

Legionellosis outbreak procedure to comply with the College's Legionella Management Plan, and the *Health Protection (Notification) Regulations 2010*.

- To ensure statutory reporting requirements are upheld.
- To prevent further infection and spread of Legionella bacteria.
- To cooperate with enforcing, investigating and management authorities in the control and investigation of a legionella Outbreak.

Outbreak Definition

Two or more cases of confirmed Legionellosis, where the onset of illness is closely linked in time (weeks rather than months) and where there is epidemiological evidence of a common source of infection, with or without microbiological evidence.

External Intervention

Reporting of a suspected case of Legionellosis is a statutory duty of the diagnosing General Practitioner/consulting specialist. Therefore, it is possible that any case or outbreak of the disease may be reported by a medical professional prior to any notification activity undertaken by the College. All outbreaks of Legionellosis will be responded to by the Local Authority's Proper Officer, under established incident control plans. It should be noted that the following procedures may, therefore, be subject to change and direction by the Outbreak Committee, as invoked by the Proper Officer.

The Outbreak Committee will be comprised of Local Authority Environmental Health Officers, Health and Safety Executive (HSE) Enforcement Officers and Community Health Specialists. They will conduct outbreak incident management, via two phases:

- The Control Phase.
- The Investigation Phase.

The College will liaise with, and cooperate with the requirements of, the Outbreak Committee.

Internal Intervention and Escalation

In the event a report of a confirmed case of Legionellosis (Legionnaire's Disease) is received the following actions will be carried out:

- Inform the **Finance & Operations Director** immediately

The following Staff will then be informed

- College Officers
- Durham University Business Resilience team

The Durham University Business Resilience team will constitute the Durham College Outbreak Management Group, who will enact the procedure below unless otherwise designated.

Outbreak Procedure

- The Finance & Operations Director will notify the HSE by completing an F2508A online form.
- In the event of a confirmed outbreak, the Finance & Operations Director will notify the Local Authority immediately, by calling Durham County Council (Environment, Health and Consumer Protection Service) on 03000 261 016.
- All applicable processes that may generate or disseminate airborne water droplets, within the affected site, will be isolated. This may necessitate the closure of the building.
- The Facilities & Housekeeping Manager will arrange for the sampling and disinfection of water systems, to halt proliferation and reduce colony forming units of the Legionella Bacteria. This process will continue until acceptable levels of colony forming units of Legionella bacteria (<100 cfu/l) are achieved.
- A full review of the LRA and existing management processes for the premises will be instructed, to be undertaken by an external water hygiene specialist.
- All management records, including existing LRAs, water system schematics, records of legionella-related temperature checks, flushes, inspections, disinfections, etc. will be made available for scrutiny by enforcing/investigating authorities.
- Full cooperation will be given to enforcing/investigating authorities.
- Only upon acceptable levels of colony forming Legionella units being achieved and reviewed, and management processes being deemed adequate (evidenced by continued sampling) will recommencement of standard processes be authorised.