

# **Corporate Health and Safety Policy**

## Part C - Section 31

### Prevention and Control of Legionella



## **CONTENT:**

### **1. PURPOSE**

### **2. LEGIONNAIRES DISEASE**

- 2.1 What is it?
- 2.2 How do people get it?
- 2.3 What are the symptoms?
- 2.4 What measures are there to control legionella?
- 2.5 What to do if you or an employee has Legionnaires' disease

### **3. RESPONSIBILITIES**

- 3.1 Duty Holder
- 3.2 Responsible person
- 3.3 Deputy Responsible Person
- 3.4 Director of Service
- 3.5 Head of Department
- 3.6 Property Service Officers
- 3.7 Premises Manager
- 3.8 Safety, Health and Wellbeing Team

## **APPENDIX A**

Management Toolkit

## **1. PURPOSE**

This Policy has been developed to assist the Council in implementing the requirements detailed in the HSE Approved Code of Practice and Guidance L8, “*Legionnaires’ disease: The control of legionella bacteria in water systems*” and British Standards Code of practice BS 8580:2010, “Water quality – Risk assessments for *Legionella* control”. This document will also assist in ensuring compliance with the Control of Substances Hazardous to Health Regulations (COSHH).

This policy outlines the requirements for managing legionella in premises managed or leased by the Council including community schools.

The policy describes the specific role of the Director for Commercial Services in ensuring the commissioning of an approved competent contractor to carry out physical assessments and testing of water systems.

The Toolkit at Appendix A gives practical information and guidance on legionella management.

## **2. LEGIONNAIRES DISEASE**

### **2.1 What is it?**

Legionnaires' disease is a type of pneumonia named after an outbreak of that illness which affected a meeting of the American Legion in 1976. The disease is caused by inhalation of small droplets of contaminated water suspended in the air. Legionnaires' disease can affect anyone who becomes exposed but occurs more frequently in men than women and principally affects those who are susceptible because of age, illness or immuno-suppression.

It is caused by the bacterium ‘*Legionella Pneumophila*’ and related bacteria that can be found naturally in environmental water sources such as rivers, lakes and reservoirs, usually in low numbers. As they are commonly found in environmental sources they may also be found in purpose built water systems such as cooling towers, hot and cold water systems, evaporative condensers and whirlpool spas.

If conditions are favourable the bacterium may grow creating conditions in which the risk from Legionnaires' disease is increased. It is therefore important to control the risks by introducing measures outlined in this document and the Approved Code of Practice & guidance document L8.

### **2.2 How do people get it?**

*Legionella* bacteria are widespread in nature, mainly in water. Outbreaks occur from water systems where temperatures are warm enough to allow growth of the

bacteria, for example in air conditioning cooling towers, evaporative condensers, whirlpool spas and sometimes water supplies in buildings.

Most outbreaks in the UK have been linked to cooling towers or evaporative condensers as part of industrial cooling systems and air-conditioning which can spread droplets of water over a wide area. Water systems in buildings without these higher risk systems can still pose a potential for legionella growth. This risk is much lower than that associated with water cooled or humidified air management systems but Legionella colonies can still develop in traditional hot and cold water systems, like those used in almost all workplaces, including schools.

Certain conditions increase the risk from legionella:

- a suitable temperature for growth, 20 to 45°C (at temperatures above 37°C the rate of multiplication increases, but ceases at 46°C. Below 37°C, it decreases and becomes insignificant below 20°C);
- a source of nutrients for the organism, e.g. sludge, scale, rust, algae, and other organic matter;
- The level of stagnation of water in the system; and
- a way of creating and spreading breathable droplets, e.g. the aerosol created by a cooling tower or spa pool.

However, remember that most people exposed to legionella do not become ill, and Legionnaires' disease **does not** spread from person to person.

### **2.3 What are the symptoms?**

The symptoms of Legionnaires' disease are similar to those of flu:

- high temperature, fever and chills;
- cough;
- muscle pains; and
- headache.

In a bad case there may also be pneumonia, and occasionally diarrhoea and signs of mental confusion.

### **2.4 What measures are there to control legionella?**

To prevent exposure to the legionella bacteria, the 'Duty Holder' must comply with legislation and this document requires the Council to manage, maintain and treat water systems in its premises properly. This will include, but not be limited to, appropriate water treatment and cleaning regimes so that harmful bacteria are not allowed to grow to harmful levels.

Remember, legionella can grow in any workplace if the conditions are right - you do not have to work with microbiological agents, e.g. in a laboratory, for exposure to occur.

## **2.5 What to do if you or an employee has Legionnaires' disease**

If you develop the above symptoms and you are worried that it might be Legionnaires' disease, see your general practitioner.

Because it is similar to the flu, it is not always easy to diagnose. A blood or urine test will be helpful in deciding whether an illness is or is not Legionnaires' disease. When doctors are aware that the illness is present in the local community, they have a much better chance of diagnosing it earlier.

If you suspect that you or an employee has contracted the disease as a result of your work then there is a legal requirement to report cases to the Health and Safety Executive and you must immediately report it to the Head of Safety, Health and Wellbeing.

## **3. RESPONSIBILITIES**

Corporate arrangements have been put in place for premises that are within the control of the Council and these will take into account all the necessary regulations and guidance notes. Periodic visits by ??? will be made to ensure compliance with those current regulations and guidance notes.

### **3.1 Duty Holder - Chief Executive**

The Chief Executive is the 'Duty Holder' as defined in the "*Legionnaires Disease: the Control of Legionella Bacteria in Water Systems*" (L8) and will through the Council's management structure, ensure all reasonably practicable steps are taken to protect employees and others persons likely to be affected from exposure to legionella bacteria in water systems owned or under the control of the Council. In Community Schools the Governing Body are seen as the Duty Holders but the Chief Executive retains the duty to set the standards and monitor compliance with duties.

### **3.2 Director for Commercial Services**

The Director for Commercial Services is responsible for ensuring corporate arrangements are in place for the management of water on all premises either directly managed or controlled by the Council.

The Director has appointed the Assistant Director for Estates as the "Responsible Person" (as defined in the Approved Code of Practice L8) to take

on managerial responsibility for controlling any identified risk of exposure from the Legionella Bacteria.

### **3.2 Assistant Director for Estates - 'Responsible Person'**

The Assistant Director for Estates has the delegated responsibility for ensuring arrangements are in place for the management of water on all premises either directly managed or controlled by the Council.

They will ensure any member of staff designated to carry out the technical functions of this role, have sufficient authority, competence and knowledge of water systems. They should also be qualified to British Institute of Occupational Hygiene BOHS P901 Legionella Management or equivalent.

Where help and advice is drawn from outside the organisation, all reasonable steps will be taken to ensure the competence of those not directly under their control. The use of consultants and contractors does not absolve the Duty holder or Responsible Person of their legal duties under Section 3 of the Health and Safety at Work Act.

The 'Responsible Person' has the direct responsibility for ensuring the implementation of this policy within all premises for which the Council manages and owns. Where leasing arrangements for any Council premises is in place the responsibilities for Legionella management must be clearly defined, e.g. Council or lessee/occupier.

For all premises either directly managed or controlled by the Council the 'Responsible Person' will be accountable to:

- arrange generate and maintain a list of all premises indicating those that have been assessed for risks of legionellosis
- ensure all maintenance work, including legionella risk assessments and specialist monitoring services are carried out to comply with the statutory requirements
- ensure that a copy of the legionella risk assessment is accessible from site (words deleted as repetition of previous bullet point)
- ensure risk assessments are updated following changes to the water system and at least every two years
- set up and maintain a Legionella Register (what does this record?)for premises
- ensure copies of the legionella service log book (electronic equivalent acceptable) are produced, accessible at the? premises and are kept up to date with appropriate statutory and documentary evidence both locally and centrally and that Council staff and, where relevant, contractors have access to them

- make arrangements so the use of systems, that present a foreseeable risk of legionellosis, are redesigned and modified. A written management scheme for minimising the risk from exposure is to be prepared and actioned
- ensure the scheme of management precautions, including the appointment of person(s), to take responsibility for the maintenance of relevant plant, equipment and systems and to provide supervision is implemented and managed
- ensure that any premises actions arising from the management of legionella are completed
- provide a regular update of legionella information with the relevant premises controller (exchange of records, inspections, risk assessments, etc)
- organise legionella awareness training for all Premises Controllers and Building Service Officers
- follow Corporate Procurement Rules to ensure the selection of competent and authorised contractors to manage legionella and to monitor their performance
- follow Corporate Procurement Rules to ensure the selection of competent and accredited contractors for water sampling, analysis and management. The standards for these contractors are contained in the Toolkit at Appendix A;
- ensure that appropriate, effective monitoring systems and compliance checks are in place and implemented to ensure that the risks are being effectively managed
- monitor Contractor performance through contractor reporting e.g. KPI's, inspections, work sheets and auditing
- will be the contact person between the Council and the Contractor and vice versa
- undertake regular meetings with the Contractor to ensure that any issues with the Contractor or the work can be addressed quickly
- arrange legionella risk assessment following modifications to water systems and ensure that an adequate system for the supervision of such work is in place. Ensure such supervisors are trained and competent to carry out this role
- receive assurance from Tenant's that they have systems in place for managing legionella in leased premises and periodically monitor that those systems remain

- submit Quarterly Management Report on legionella management to Directorate for Commercial Services (and Head of Safety, Health and Wellbeing)
- provide support, guidance and advice to Premises Manager's when required
- respond to emergency situations involving the identification of legionella in the water, legionella outbreak and facilitate plans to manage the situation and minimise the risk of exposure
- report to SHaW team any incidences, identification of legionella in the water and or, legionella outbreak

### 3.3 Deputy Responsible Person

It is necessary for the Responsible Person to nominate one or more deputies as '**Deputy Responsible Person**' who will adopt the responsibilities of the 'Responsible Person' in their absence and with whom they can liaise to ensure the obligations under L8 are implemented. All managers or occupiers of Council owned/leased premises have a duty to co-operate with the Responsible Persons and their Deputy to ensure the duties placed upon the 'Duty Holder' to control the risks of legionella can be fulfilled.

### 3.4 Directors

Directors can be viewed as 'owning' all property, on behalf of the Council, and take on the chief role for managing the assets and ensuring that adequate provision is made to enable Assistant Directors/Heads of Service to establish a health and safety framework to manage their services. Directors will familiarise themselves with this document and ensure that health and safety arrangements in their services are complied with at all times.

Directors must ensure that:

- all buildings for which they have responsibility have been risked assessed for legionellosis and reviewed every two years;
- that remedial action detailed in each survey is carried out;
- copies of the legionella risk assessment and water service log books (electronic equivalent acceptable) have been issued to premises and are kept up to date both locally and centrally;
- local systems are set up to ensure staff receive adequate information, instruction and training;
- reporting to Building Service Team and SHaW team any incidences of legionella being identified in the water or legionella outbreak ;



### **3.5 Assistant Directors/Heads of Service**

Assistant Directors/Heads of Service have the responsibility to establish the health and safety framework for the management of Council property, within their services. They must ensure that the duties relating to legionella are met by receiving reports on the performance of the management of their water systems from their Premises Manager as part of their regular health & safety inspections.

Chief responsibility for ensuring that the duties relating to legionella are met will be overseen by the Assistant Director for Estates.

### **3.6 Property Service Officers**

Property Service Officers are, in general, responsible for Council properties or land that is leased. As a representative of the Council they have a legal responsibility to ensure, so far as reasonably practicable, that the detail of all significant risks are shared with the Tenant and vice-versa.

Consequently, they are responsible for:

- informing the Tenant, Leaseholder:
  - if they are Duty holder under the terms of the lease agreement
  - that the Council may request information and may inspect to monitor whether the property is maintained in accordance to statutory requirements
- as practicable ensure the Council Standard Terms & Conditions and Leasehold arrangements are adopted by the Tenant;
- implement a system for periodic monitoring the tenant to ensure compliance with the contract and maintenance of the building;

### **3.7 Premises Manager**

Premises Managers, or the persons nominated by the Responsible Person, are responsible for monitoring the implementation of the legionella management system for the premises. The role is two-fold - firstly to assist the 'Responsible Person' to implement the written scheme through regular monitoring and supervision those involved in operational procedures and secondly, to maintain appropriate records, including details of:

- the person(s) responsible for conducting the risk assessment, managing, and implementing the written scheme;
- the findings of the risk assessment;

- the written scheme and details of its implementation;
- the results of any monitoring, inspection, test or check carried out and the dates and by whom, and
- the corrective action taken to ensure the water system complies with L8 and BS 8580
- recording all relevant details in the Water Service Log Book or electronic equivalent.

### **3.8 Safety, Health & Wellbeing (SHaW) Team**

The SHaW team provide advice regarding legionella in Council premises and set Council policy in this regard. The H&S Consultant's role is mainly advisory; however, in the event of an actual or potential breach in safety requirements which pose imminent risk, they are empowered to take immediate action, on behalf of the Chief Executive, to stop work.

The Head of Safety, health and Wellbeing has the responsibility for:

- acting as the Council's statutory health and safety advisor
- regular reporting to the Chief Executive and Council Directors Group on how the duties relating to legionella are being met
- advising on the health and safety framework for the management of all Council property and
- monitoring compliance with this policy.

# LEGIONELLA MANAGEMENT TOOLKIT

## **CONTENT**

- A. OUTLINE OF REQUIREMENTS**
- B. WRITTEN SCHEME FOR CONTROL OF LEGIONELLA**
- C. MANAGEMENT OF WATER SYSTEMS**
- D. WATER SYSTEM SAFETY PROGRAMME**
- E. SAFETY PROCEDURES – MAINTENANCE AND CLEANING**
- F. ACTION IN THE EVENT OF A SUSPECTED OR CONFIRMED CASE OF LEGIONNAIRE'S DISEASE.**
- G. CONTRACTS**
- H. LEGAL PROVISIONS**
- I. LEGIONELLA AWARENESS**

## **A. OUTLINE OF REQUIREMENTS**

### **A.1 Introduction**

The Council will manage the risk from legionella by:

- i) appointing a competent person i.e. 'Responsible Person' to lead in ensuring the management of legionella throughout the Council;
- ii) appoint CHAS approved and UKAS accredited competent contractors to carry out;
  - legionella risk assessments
  - management of water systems to reduce the risks of legionella identified in the risk assessment
  - carry out analysis of water samples as detailed in the scheme of works
  - ensure that each approved contractor is independent of each other to avoid conflict of interest
  - ensuring that all Council managed or owned premises have and keep an up to date water service log book (wslb) (equivalent electronic version) in which all relevant documentation is recorded in order to comply with statutory duties
  - ensuring the risks of legionella are assessed at all Council managed or owned premises in accordance with L8 and BS 8580
  - ensuring that a schematic drawings or plan of the water system specific to each location forms part of the wslb and satisfies the requirements of L8 and BS 8580
  - ensuring that a site specific scheme of works is prepared for the water system specific to each location and forms part of the wslb and satisfy the requirements of L8 and BS 8580. This will set out how the risk will be managed
  - having clear roles of responsibility and reporting between the Council, approved Contractor(s) and Premises Managers
  - having systems in place to identify any actions that arise as a result of the risk assessment and management of the water system, that persons are appointed to carry out the actions and that the actions have been completed
  - the Contractor providing written instruction to the Premises Manager on local issues such as the frequency of running seldom used outlets and maintain records;
  - ongoing review and monitoring of the contractor works, action plans and works reports and link with the legionella risk assessment and schedule of works

- ensuring that Premises Managers receive appropriate training with regard to the management of legionella;
- provision of up-to-date information on the location for those who need to know

## **A.2 Assessing the Risk**

The specific requirements of the risk assessment can be found in the HSE publication, "*Legionnaires Disease: the Control of Legionella Bacteria in Water Systems*" (L8) and BS 8580 British Standards Code of practice BS 8580:2010, "Water quality – Risk assessments for *Legionella* control".

Before any formal management system for water systems can be implemented, a risk assessment has to be carried out to decide the possible risks. The purpose of the assessment is to decide:

- the risk to health, i.e. whether the potential for harm to health from exposure is reasonably foreseeable unless adequate precautionary measures are taken, and;
- the necessary measures to prevent, or adequately control, the risk from exposure to legionella bacteria.

The risk assessment enables the 'Duty Holder' to show that all relevant factors, and the steps needed to prevent or control the risk, have been considered.

The risk assessment will provide information for the production of the documented action plan of maintenance work required; the written scheme; the monitoring programme and logbook requirements.

The extent of specialist knowledge and expertise required to carry out this initial and on-going assessments will be an approved Contractor with the advice from the Responsible Person. They will ensure the external organisation has the requisite knowledge, expertise and competency in accordance with the Approved Code of Practice (L8) and will liaise between the various Services and the Contractor(s) appointed.

## **A.3 Written Scheme**

Where the premises risk assessment identifies there is a reasonably foreseeable risk, steps must be taken to mitigate this risk so far as is reasonably practicable. When all the risks can not be eliminated there must be a written scheme for controlling the risk.

The 'Responsible Person' is responsible for any remedial works required and will either require this work to be carried out by the Approved Contractor through the Contract Manager or via the 'Appointed and Nominated Persons' to ensure the implementation and monitoring of the control measures is in strict compliance with maintenance programmes and timescales stipulated in the written scheme.

Items to be included in the written scheme are shown at Part B.

#### **A.4 Training and Qualifications**

It is a function of the Responsible Person and Deputy to ensure that they, and those who are appointed to carry out any form of control measure, are suitably trained and competent to perform those functions.

The Premises Manager and a deputy at each premises shall be suitably trained. It is for the 'Responsible Person' to ensure suitable training, in conjunction with the premises managers, is arranged. Training must ensure employees are competent to an adequate standard of basic awareness relating to water quality and Legionnaires disease

The Responsible Person must ensure that the external organisation(s) contracted to undertake the risk assessments and on-going monitoring are competent and suitably trained and able to carry out their duties in a safe and proper manner.

#### **A.5 Monitoring Regime**

The written Legionella Control Scheme will identify specific monitoring and maintenance regimes that need to be formulated and carried out on a localised basis. All premises will be monitored to ensure this regime is being implemented and all results from the monitoring must be entered into the site logbook.

The Premises Manager will be competent to carry out the recommended monitoring of the Contractor. Temperature checks, water sampling, chemical treatment and the tasks requiring engineering skills will be undertaken by an approved contractor/competent person.

#### **A.6 Premises Water Service Logbook**

On completion of the risk assessment, a building specific logbook will be formatted and delivered to the Premises Manager. The 'Responsible Person' will validate the monitoring regime and in conjunction with the Premises manager and appropriate Contractor put in place arrangements for its implementation.

The logbook will detail clearly the:

- Full site address
- Name of site contact (managerial)
- Name of risk assessor and the company name
- Name of the 'Responsible Person' for the property
- Date of risk assessment
- Recent schematic drawing of water system, i.e. storage tanks and associated pipe work etc that is dated and initialled by a competent person

- Detail of operation of the water system, relevant to the controlling the risk
- Controls to be implemented, complete with schedule
- Chlorination and Legionella test certificates will be inserted into the premises' logbook within 28 days of the test being taken and copied to the appropriate 'Responsible Person'
- a copy of the Risk Assessment will be included within the log book
- A record of the recommended action/work and remedial works undertaken by who and when to resolve the action/works

## **A.7 Disinfection - Chlorination**

Water services distribution pipe work will be disinfected in accordance with BS6700 for any of the following reasons:

- Any new installation before being commissioned into use to remove contamination which may have occurred during construction or installation
- Before using installations which have been closed down for a period of time, e.g. before opening for winter or summer use
- If a routine inspection shows it necessary
- If the system or part of it has been substantially altered or entered for maintenance purposes in a manner that may lead to contamination
- Following an outbreak or suspected outbreak of legionellosis or any other water borne infection/disease

The task will be carried out using an approved competent contractor

Chlorination test certificates will be inserted into the premises' logbook within 28 days of the test being taken and copied to the Responsible Person.

## **A.8 Auditing**

The Responsible Person must ensure there are processes in place to undertake a regime of auditing of all logbooks and the monitoring of all risk assessments on an annual basis with information provided quarterly to the Directorates Senior Management Team (SMT) and SHaW Manager

After the Risk Assessments have been completed and the monitoring programme established, the record sheet will be updated in accordance with the programme for the individual site and all documentation will be kept at a location that is accessible on site for auditing.

To ensure that the duties relating to legionella are met, the BST(who?)/Estates will monitor performance and provide quarterly reports to the Commercial Service Directorate and an annual health & safety report at the Corporate JNCC to confirm that the required checks and monitoring systems within the Council

premises are being carried out. This will provide performance assurance that the Council is complying with its statutory responsibilities, and also demonstrate that the roles of the Responsible Person, Premises Manager and approved Contractors are being correctly and effectively undertaken.

The Council's legionella management system will be audited and reviewed every two years (or as necessary due to legislative changes) by the SHaW team in consultation with the relevant Responsible Persons to ensure it remains effective and fit for purpose to manage the risks related to Legionella.

#### **A.9 Action in the Event of a Suspected or Confirmed Case of Legionnaire's Disease.**

Details of the action to be taken if an outbreak is suspected or occurs, or where urgent action is required following routine inspections (e.g. high bacterial counts) is shown at **Part F**.

#### **A.10 Reporting of Outbreaks**

The Head of Safety, Health and Wellbeing and the Councils Emergency Planning Officer must be immediately informed of any outbreak.

Under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR), Doctors will notify employers of cases Legionellosis if the current job of the employee concerned exposes them to an increased risk of exposure. These cases must be reported to the Health and Safety Executive (HSE). Please refer to the arrangement on accident and incident reporting, Section 4 in the Corporate Health, Safety and Welfare policy.

#### **A.12 Management of Addition Features**

##### **i) Drinking water fountains**

Legislation requires that an adequate supply of wholesome drinking water shall be provided in the workplace for all persons at work.

Where the supply of drinking water is in the form of a jet, the fountain must be regularly cleaned, inspected and maintained. The water fountain should be included as part of the managing water programme.

##### **ii) External sprinklers and portable Tanks**

Fine droplets, that may be inhaled, can be formed at showers, by spray fittings on taps, hose-pipe sprays. While in the general the risks are managed for premises there is a risk from the use of external taps, hose pipes and portable tanks.



To reduce the risk of infection there are a number of things that can be done:

- Ensure all external taps are flushed through at least once a week.
- Clean and de-scale external taps and shower heads on hose pipes monthly.
- Consider removing spray fittings on taps/hose pipes if you are having difficulty keeping them clean and free from scale.
- It is recommended that any flexible connection hoses to taps are of a standard accredited under the Water Regulations Advisory Scheme. Seek the advice of a plumber if you are not sure.
- Drain hosepipes after use.
- Ornamental features such as fountains should be kept clean.
- Always flush water through external taps or hose pipes for 2-3 minutes without creating a spray.

Standing water is a health risk and any container which has held or does contain water, especially spray bottles, could cause risk of legionnaires' and other diseases. Always clean spray guns, bottles and pumps thoroughly before use and empty and air dry well, before putting away for the winter. Never leave containers sitting full of water for long periods of time. Avoid contact with any water that has stood for long periods. Use domestic tap water to fill spray bottles.

### iii) [Spa and Swimming pools](#)

Separate documentation has been issued for the healthy and safe management of Spa pool and Swimming pools. These are

- [Management of Spa Pools – risk of infection](#)
- [Managing health and safety in swimming pools](#) (HSG179)

These documents address water borne diseases and infections, particularly legionella.

### **A.13 Further Information:**

General information, including leaflets and sources of other guidance, can be found by following the links below:

[www.hse.gov.uk/legionnaires/index.htm](http://www.hse.gov.uk/legionnaires/index.htm) [www.hse.gov.uk/pubns/iacl27.pdf](http://www.hse.gov.uk/pubns/iacl27.pdf)

For guidance, please contact:

- The Council's Safety, Health and Wellbeing team on 020 8359 7960 or
- The Building Service Team on 020 8359 4320

## **B. WRITTEN SCHEME FOR THE CONTROL OF LEGIONELLA**

### **B.1. Content**

Items to be included in the written scheme are as follows:

- i) Plan of plant or system layout (a schematic plan is enough), which should contain:
  - The latest up-to-date copy and parts which are temporarily out of use
  - The date when they were last reviewed and updated and the initials of the individual and their organization
  - A description of the safe and correction operation of the system
  - Mitigation measures to be taken to remove the risk
  - Types and frequency of checks to be carried out to ensure the success of the scheme
  - Actions to be taken if the scheme is found to be deficient
  
- ii) Details on how to use and/or carry out:
  - The physical treatment programme (e.g. how to use temperature control for hot and cold water systems)
  - Any chemical treatment programme that is in use (including manufacturer's data on effectiveness, the concentrations and contact time required for the substances used)
  - Information on storage, handling, use and disposal of the substances in use (required by Control of Substances Hazardous to Health (COSHH) Regulations)
  - System control parameters (plus allowable tolerances), physical, chemical and biological parameters, measurement methods, sampling locations, test frequencies and procedures for maintaining consistency
  - What to do in case the control limits are exceeded, including the channels of communications
  - Procedures for cleaning and disinfection
  
- iii) The correct operation of the water-system plant should be described so that faults are easier to identify:
  - Procedures for commissioning and re-commissioning
  - Procedures for shutdown
  - Checks for warning systems and diagnostic systems in case of system malfunction
  - Maintenance requirements and frequencies

### **B.2 Record Keeping**

- i) The types of records to be kept include:

- Details of who is responsible for carrying out the risk assessment, managing and implementing the written scheme
  - The significant findings of the risk assessment
  - The written scheme and details of its implementation
  - The results of any monitoring inspection, test or check carried out, and the dates (must include details of the state of operation of the system, i.e. in use/not in use) The length of time that those records should be kept for is as long as they remain current, and for at least two years after that period
- ii) Results of the monitoring, test or check must be kept for at least five years. It is also essential that communication channels are established so that everyone knows what to do and how to do it. Records for water system management are checklists of records you need to keep to ensure and demonstrate that the risks from the water system are adequately controlled:

### **B.3 PREVENTION MEASURES**

The following measures **must** be considered:

- Improved engineering design of water systems with a view to eliminating 'dead ends' and other places where water can stagnate
- Controlling the release of water spray
- Ensuring all water holding tanks are covered and fitted with air vents and inspection covers, and are properly lagged to prevent temperature rises
- Avoiding water temperatures between 20°C and 50°C
- Avoiding the use of materials that could provide a harbour of food for bacteria and other organisms
- Treatment of water supplies, in particular holding tanks
- Regular cleaning, maintenance and operation of water systems, e.g. tanks, calorifiers, pipework, filters, fittings, showers and taps, with disinfection of water systems at predetermined intervals.
- Frequent sampling of water by a competent person
- Staff training in personal precautions where necessary, e.g. use of personal protective equipment, and procedures for handling samples
- Regular monitoring of results of samples and procedures adopted by water treatment companies
- Ensuring that the system is operating correctly and is properly maintained
- Keeping the written scheme for exposure control up to date

## **B.4 WATER MONITORING**

Sampling for Legionella and the interpretation of results are specialised processes and should only be carried out by competent persons. Sampling often produces a positive result for the detection of Legionella as many water systems are colonised with Legionella without being associated with infections. For this reason, routine water sampling of hot and cold water systems is not recommended, though it may sometimes be appropriate to check the efficacy of the water management system. It is recommended, however, that routine sampling of cooling towers for Legionella is carried out every three months.

## **B.5 HOT AND COLD WATER SERVICES**

The following points are important in preventing the growth of the bacteria within hot and cold water systems:

- Hot and cold water distribution systems should be well enclosed to prevent the entry of foreign matter - water supply tanks should be covered by lids with overlapping edges which are secured to the tank, and overflows should be protected by fine mesh screens where possible.
- Parts of the water system, such as tanks and calorifiers, where sludge, scale, debris and other organic or inorganic matter can accumulate, should be readily accessible for cleaning.
- The water system should be designed so that water is not allowed to stand undisturbed, for example in oversized or rarely used water tanks, calorifiers or pipes.
- Where two or more tanks are installed to serve the same system, they should be arranged in series so that water flows through all the tanks.
- If the system, or part of the system, is used only intermittently it should incorporate isolating valves, drain points at its lowest part and, where possible, pipes which are laid to fall towards the lowest point.
- Drain points should be large enough to permit removal of sludge - it may be necessary to fit supplementary drains to the bottoms of items of the plant such as calorifiers and condensers.
- Where possible, the layout of cold services and tanks should ensure that water does not become warm.
- The use of thermostatically controlled showers with fail-safe mixing valves (i.e. valves which are unaffected by changes in water pressure and automatically close the hot water supply if the cold water fails) will allow the hot water system to run safely at above 50°C - automatic drain valves may also be used to ensure that the shower head and control valve are drained when the appliance is shut off.
- Storage tanks and calorifiers should be inspected annually, then cleaned and disinfected where there is a build up of slime, scum or other deposits - it is good practice to discharge water from the bottom of the calorifier often enough to reduce the build up of sediment and other materials.

## **B.6 DISINFECTION OF WATER SYSTEMS**

Hot water systems can be disinfected by chlorinating the water in the header tank to between 20 and 50ppm, then allowing it to flow through all parts of the system and stand for at least 4 hours (or preferably overnight). The entire system is then thoroughly flushed. In large buildings it may be necessary to disinfect different sections in turn. Staff and residents should be warned that the water system is heavily chlorinated. This treatment should not be carried out by untrained personnel. Cold water services should be disinfected in accordance with BS 6700 1997 'Code of Practice for the Specification for the Design, Installation, Testing and Maintenance of Services Supplying Water for Domestic Use within Buildings and their Curtilages'.

## **B.7 AIR CONDITIONING AND INDUSTRIAL COOLING SYSTEMS**

The principal risk arises from open evaporative cooling towers, where aerosols drift from the tops of the towers and spread considerable distances. The sprays are formed, in most cases, due to poor maintenance of drift eliminators and air intake louvers. The cooling coil condensate tray on these systems can also present a particular risk. In certain cases, a poorly plumbed system can allow contaminated water discharging to a drain from the cooling tower, to siphon back up the condensate drainage pipe and infect the condensate tray and, eventually, the conditioned air. A correctly designed cooling condensate system will prevent water from entering the air duct - a sloping tray for improved drainage, incorporating a drain connection at the lowest point, and a substantial water trap and air break will minimise any potential for infection. The Chartered Institution of Building Services Engineers has published some technical guidance with regard to the design of cooling towers: [Minimising the risk of Legionnaires' disease, TM13, 2002](#)

## **B.8 HUMIDIFIERS AND AIR WASHERS**

Humidifiers have not been specifically linked with outbreaks of Legionnaires' disease, they have however, been implicated in other respiratory conditions. Steam jet humidifiers and those fed directly from a rising main are not thought to give rise to microbiological contamination risks. Many humidifiers however, use water from storage tanks which can become contaminated. Air washers and spray chambers should be maintained in the same way as cooling towers.

## **C. MANAGEMENT OF WATER SYSTEMS**

### **C.1 INTRODUCTION**

The Council is committed to providing a safe and healthy environment which includes the design, management and maintenance of safe water systems. The

water systems within our premises are formally assigned to Building Service Team, Facilities Management and Premises Controllers who shall ensure compliance with this policy and follow current best practice.

The systems should be assessed and evaluated to ensure that there is a low risk to staff, pupils, visitors and others coming into contact with very hot water. Where practicable, temperature controls and mixer taps (thermostatic mixing valves) shall be used to reduce hot water temperatures at outlets to 50-55°C. Where this is not practicable, signs shall be affixed warning of higher temperatures or thermostatic mixing valve (TMV) installed.

Pipework runs shall be inspected and wherever practicable hot water pipes at temperatures above 60°C shall be either secured in inaccessible positions such that there is little risk of coming into contact with the pipework inadvertently, or else the pipework shall be boxed in or otherwise made safe.

Water systems shall be assessed, maintained and checked to ensure that the system is microbiologically clean and action taken to implement guidelines for microbiological safety.

Drinking water supplies shall be maintained in a good, clean and reliable condition, and, as appropriate, labelled.

Records shall be kept of the actions taken to ensure and maintain safety in water systems.

## **C.2 CHECKS ON ALL WATER SYSTEMS**

Checks should be documented in individuals the job description for the members of staff responsible and in the listing of health and safety related duties assigned to nominated employees in the arrangements section of the Health and Safety Policy Statement. The HSE ACoP *L8 Legionnaires' disease: the control of legionella bacteria in water systems (2000)* specifies that appropriate provision for 'high risk' elements of water systems should be made. Contracts with external contractors and suppliers should be amended to include these good practice guidelines. **This is specialist work that requires an appropriately trained person to make these checks.**

### **i) Monthly**

A competent person carries out a check on water systems within the premises, including;

- Organise the monthly checks so that they are a sample, but all of the system including all water outlets are checked over a one-year cycle

- Temperature checks on hot water systems to ensure that hot water is stored at 60°C or higher in water tanks, calorifiers, etc.
- Temperature checks on hot water distribution and outlets that water is reaching 50°C within one minute of running, checking as a minimum at outlets nearest and furthest from the calorifier
- Temperature checks on cold water storage and distribution to confirm that the water is at 20°C or below, checking outlets nearest and furthest from intake and storage
- A member of staff checks on the air conditioning system within the premises, including the condition of cooling towers and evaporative condensers, water treatment systems, etc.
- Report to local management and/or responsible person (such as the Premises Manager) on matters requiring attention
- Record the findings.

**ii) Quarterly**

- Condition review of all accessible parts of the high risk element of the system
- Water testing for total bacterial colony count for water system defined as high risk (cooling towers, etc.)
- Remove shower heads, de-scale and then disinfection with chlorine-based bleach in water (leave to soak for a few minutes) and refit

**iii) Annually (or more frequently if stated in a specific risk assessment)**

The following should be checked as part of the overall assessment of the water system:

- The condition in water tanks (cold water storage), looking for the presence of organic materials, vermin, etc. (HSE Guidance).
- The conditions in calorifiers (hot water storage), looking for organic materials and unduly heavy build-up of scale (HSE Guidance). Drain and treat to remove limescale.
- The condition of accessible pipework and insulation.
- Check that the records are up to date for temperature checks and inspections, water testing and certificates.
- Review activities by contractors working on the water system over the preceding 12 months to confirm compliance.
- High risks, including cooling towers and evaporative condensers - review the arrangements and records to confirm that they are satisfactory and check that the registration of cooling towers with the local authority has been undertaken.
- Review arrangements as necessary and ensure relevant information is disseminated to management, staff and those responsible for training.

## **D. WATER SYSTEM SAFETY PROGRAMME**

**D.1** The procedure for starting a safe system of work for water systems is a guide for **competent persons** with responsibility for health and safety to ensure a water system safety programme of work is established and to audit the system already in place to evaluate the need for amendment.

### **D.2 Procedure for a Water System Safety Programme**

Obtain and review a schematic 'as-built' drawing of the water system in the premises. Identify the nature of the drinking water system, the cold water system, the hot water system and air conditioning if installed.

#### **i) For the drinking water system:**

- Inspect from water intake to delivery for good condition
- Ensure that there is either no storage or that any storage is properly designed and sealed from all ingress of dirt, vermin, etc.
- Ensure that there is good water circulation to avoid creating an area of stagnation
- Check that drinking water outlets are correctly labelled, that cups/glasses are provided (except fountains) and that non-drinking water in a location where staff may assume it is potable is clearly labelled ('Not Drinking Water')
- Check that drinking water is available at a refreshing temperature. If not, check that potable water pipes are not close to hot water pipes (if they are, insulate or move them).

#### **ii) For the cold water system:**

- Check that tanks and pipework are in good condition
- Check that the tanks are clean, have well-fitting lids, that vermin/fly screens are fitted where necessary to maintain cleanliness and check that water inlets are at opposite ends of the tank to draw-down outlets (to prevent short circuiting) and that the draw-down is low enough in the tank to cause circulation when the water is drawn off
- Check that the temperatures through the system do not exceed 20°C (if they do, check on the proximity of the pipework to the hot water supply as above)
- Check that there are lengths of pipe as short as possible to each outlet (avoid 'dead legs' where water can sit for long periods incubating bacteria and inoculating the water system)
- Identify any lengths of pipe which require water to be drawn off to achieve circulation, and log that the water should be drawn down at



least every week (leaving taps running for five minutes, flushing toilets, etc.) if that part of the building is unused for any period

**iii) For the hot water system:**

- Check the condition of the heating system to ensure it meets performance requirements (minimum storage temperature 60°C). If there are no written specifications draft a baseline specification for water treatment and future checks.
- Check the design of the calorifier - it should have a drain tap close to the base.
- Check the condition of the calorifier - it should be clean, free from scale and organic material.
- Check that water softeners, filters and strainers are under frequent maintenance against a written schedule. If not, draft a schedule as advised by the manufacturer.
- Check that the pipe runs do not have areas accessible to staff and others such that contact and burns may occur. If they do, draw up a plan to relocate pipework or to box in.
- Check that pipe runs in plant rooms, etc. are marked as to contents as a visual warning to maintenance staff.
- Check hot water outlets for temperature (the required range is 50-55°C after one minute of running). If significantly above, review the requirement for fail-safe thermostatically controlled mixer valves.
- Check the water outlets for scale, particularly shower heads, and clean as necessary.

**iv) For an air conditioning system:**

Ensure that experienced competent persons are maintaining the system in accordance with HSE Guidelines. Confirm that there is a written schedule defining maintenance, water treatment and testing, covering:

- Design and performance criteria
- Inspection and cleaning regime
- Water treatment (prevention of corrosion and organic contamination)
- Water monitoring regime

**v) Emergency arrangements**

A contingency plan for shutting down water systems should be drawn up for use in the case of an outbreak.

## vi) Records

### Checklist

- Plan of the water system
- Simple description of the elements of the water system or systems e.g. drinking water, cold water, hot water, air conditioning
- Risk assessment

### System operation - guide to day-to-day management

- Maintenance guide
- Inspection, checking and testing arrangements
- Records kept for:
  - Water treatment programme
  - Water temperature checks
  - Inspections and tests
  - Test results and actions taken
  - Cleaning and disinfection programme and actions
  - Any other relevant information

## E. SAFETY PROCEDURES – MAINTENANCE AND CLEANING

To prevent risks to the health of employees and others, such as contractors involved in the sampling of the water and the maintenance and cleaning of plant equipment a number of precautions are necessary.

### E.1 Procedure for Precautions

- Ensure the use of self-contained breathing apparatus at all times by employees and other persons working in an area where an aerosol containing Legionella pneumophila bacteria is produced, or may be produced (this requirement applies only to those engaged in the cleaning of the plant or equipment with high pressure hoses, or those working inside cooling towers during a shut-down period).
- Ensure that only staff trained in the handling of pathogenic bacteria are allowed to take and handle samples for testing for the presence of Legionella
- Provide and maintain safe access to, and egress from, all sampling points and areas
- Provide information, instruction, training and supervision for all persons who may be at risk prior to work commencing

- Operate a permit-to-work system taking into account the above precautions where persons are required to enter plant for inspection, cleaning and maintenance purposes

## **E.2 Procedure for the Emergency Cleaning of Cooling Towers**

To be carried out as soon as possible after the cooling water system implicated in an outbreak of Legionellosis has been identified.

- Switch off the fan immediately
- Take samples for laboratory investigation before any further action
- Switch off the circulation pump as soon as is practicable and decommission the system
- Consult the enforcing authority before proceeding further
- Keep all personnel clear of the tower area
- When cleared by the enforcing authority, add sodium hypochlorite to the system water to obtain a measure concentration of 50mg/l of free chlorine
- Circulate the system water with the fans off for a period of a least six hours
- Maintain the free chlorine level at an absolute minimum of 20mg/l at all times
- Use a suitable bio dispersant
- After six hours de-chlorinate and drain the system
- Undertake manual cleaning of the tower, *sump* and distribution system with cleaning staff wearing fully pressurised respirators
- Refill with fresh water and add sodium hypochlorite
- Re-circulate, without using the fan, at 20mg/l of free available chlorine for six hours
- De-chlorinate and drain the system
- Refill, re-circulate and take samples for testing
- Re-commission system when test results detect no Legionella and/or permission is granted by the enforcing authority

## **F. ACTION IN THE EVENT OF A SUSPECTED OR CONFIRMED CASE OF LEGIONNAIRE'S DISEASE.**

If an outbreak is suspected that may be attributed to either; the water system within a building; where urgent action is required following routine inspections, the following course of action must be taken:

### **F.1 Reporting Procedure**

- i) It is necessary to put the following reporting procedure into operation and it must be adhered to.

- In the event of a legionella - positive water sample or TVC (total viable counts) exceeding the action limit
  - Anything untoward being found during a risk assessment
- ii) Then the approved contractor managing the water system must notify:
- Responsible Person
  - SHaW Manager
  - Premises/Building Manager
  - In the event of (1, 2 or 3) being unavailable, the message must be relayed to the Service Director responsible for that premises
- iii) The message will state:
- Water sample positive or nature of defect that requires action
  - Address of premises concerned
  - Location of water sample taken
  - Sero-group of organism isolated
  - Bacteria count.
- iv) When the issue is identified to the Responsible Person he/she will ensure all necessary actions required to control the situation in accordance with L8 recommendations are implemented
- v) The Health and Safety Executive may invoke the following actions in the event of an outbreak:
- Shut down any processes capable of generating and disseminating airborne water droplets and keep shut down until sampling procedures and remedial cleaning or other work has been done and final clearance is given to restart the system.
  - Take water samples before any emergency disinfection takes place.
  - Seek employee health records.
  - Council to fully co-operate in subsequent investigation of any plant, including;
    - tracing of all pipe work runs
    - detailed scrutiny of all operational records
    - 15 -statements from plant operatives and managers statements from water treatment contractors/consultants

- vi) Any infringement of legislation may be subject to formal investigation by the HSE
- vii) The Responsible Person in conjunction with their Deputy and Premises Manager will monitor that the appropriate action is being taken
  - Determine whether further advice/assistance is needed
  - Determine whether the incident is reportable to **HSE** and if so ensure that this is done via the SHaW Team
  - Maintain a record of events and carry out an investigation into the cause.

## **G. CONTRACTS**

### **G.1 General Duties**

For work carried out on Council premises, the Council has a duty to ensure that its employees have a safe place of work. In order to fulfil this requirement the Commissioning Officer must take steps to ensure that the contractor;

- is competent to carry out the work safely
- has included the necessary safety measures to protect occupants of the premises in planning and costing the work.

The Management of Health and Safety at Work Regulations requires two or more employers on the same premises to co-operate, co-ordinate and communicate their activities to ensure that Contractors brought onto the premises are provided with information on risks to health and safety on the premises and measures taken by the host to control the risks.

To comply with these duties and to enable the Contractor to plan and cost the work effectively for safety, the Commissioning/Supervising Officer or CDM Co-ordinator (if the job is subject to the CDM Regulations) **must**:

- ensure so far as is reasonably practicable that the Contractor is provided with sufficient information to work safely
- ensure that the Contractor clearly specifies the precautions, which will be taken to control risks
- agree the required precautions with the Contractor
- monitor the work of the Contractor to ensure that safeguards are properly managed and remain effective

The Council also has a duty to ensure that employees of Contractors are not endangered by the way Council staff carry out their own work. This duty will

require the Commissioning/Supervising Officer or CDM Co-ordinator to provide information to the Contractor on such matters as;

- emergency procedures in the premises
- hazardous processes in the areas of works, such as fumes or dusts emitted in the work area
- movement of people, plant or transport which could affect the Contractor's operatives

The Commissioning Officer or CDM Co-ordinator may need to consider stopping processes or removing materials from the work area before the contractor starts.

The legal duty imposed on the Council includes the cleaning, repair and maintenance of plant, machinery and building, whether such work is carried out by Council employees or independent Contractors. This duty can extend to protecting members of the public or employees of other organisations, including Contractors' staff, who may be affected by the Contractors' activities on behalf of the Council.

A similar duty relates to the safety of premises, although in some cases "control" of the premises may be the responsibility of others, (if premises are leased or shared). Matters which need to be drawn to the contractor's attention to meet this duty include;

- the location of any services
- any hazardous materials in the premises such as asbestos insulation
- contaminated ground
- fragile roof material, etc.

In addition, Commissioning Officers, CDM Co-ordinators and Premises Controllers may need to co-ordinate the activities of several Contractors on the premises to ensure they do not affect each other's health and safety.

## **G. 2 Approved contractors - Legionella**

Only approved contractors will be employed to undertake the risk assessment, management and analysis of water systems/service to minimise the risk of legionella. In addition, the legionella contractors must have their safety policy pass a CHAS assessment within the previous three years to become listed on LBB Approved Contractor Register. Such Service Providers should abide by the Legionella Control Association [Code of Conduct](#) and issue a valid certificate of Registration.

The contractors **MUST** be independent of each other in order to avoid any future conflict. Asbestos contractors are also required to submit the following

documentation for assessment:

- i) Legionella Risk Assessment
  - A declaration outlining the Contractor's experience with regard to carrying out legionella risk assessment plus two references from previous jobs.
  - The person appointed to carry out the risk assessment should be able to demonstrate that they have specialist knowledge of *Legionella* bacteria, relevant experience of water treatment and the water system(s) to be assessed, and are competent to carry out any necessary surveys, measurements and sampling (see *Clause 7 BS 8580*). For example competence can be demonstrated by CV indicating the assessor's experience and qualifications (Qualified to British Institute of Occupational Hygiene BOHS P901 Legionella Management or equivalent). A complex site might require input from more than one assessor of different expertise.
  - A Method Statement for the works.
  
- ii) Water Management Service
  - A declaration outlining the Contractor's experience with regard to the management of water systems plus two references from previous jobs.
  - Evidence of the Contractor mechanisms for ensuring staff are suitably competent.
  - A Method Statement for the works
  
- iii) Analysis Laboratories
  - A declaration outlining the Contractor's experience with regard to carrying out legionella risk assessment plus two references from previous jobs.
  - Accreditation by the UK Accreditation Service (UKAS).
  - A Method Statement for the works.

Proposed Contractors will be subject to assessment or validity of submitted documentation. The SHaW Team will carry out the CHAS assessment of legionella/water management contractors. Assessment of performance prior to, during and after the works will be carried out by the Responsible Person or nominated deputy. Inspection and/or monitoring of the Contractors performance may be carried out by the SHaW Team as required.

### **G.3 Sub-contracting - requirements placed on main contractor or consultants**

Where legionella management is to be undertaken by Sub-Contractors who are managed by a Principal Contractor or where Consultants are employed to manage Contractors, the Commissioning Officer responsible for the project must ensure - through contract documentation with the Principal Contractor or Consultant - that they are provided with a copy of this document and that they apply the standards contained within this document. In addition, the Supervising Officer must remind the Principal Contractor or Consultant that only Council approved contractors are allowed to undertake these works.

## **H. LEGAL PROVISIONS**

There are no specific regulations concerning the control of Legionella bacteria, but a Approved Code of Practice (ACOP) L8 and BS 8580 was published which collates material that must be complied with unless anyone in breach of health and safety law can prove that they have complied in some other equivalent way.

### **H.1 HEALTH AND SAFETY AT WORK ETC ACT 1974**

Both the general and more specific duties on employers and occupiers of premises to protect the health of employees and other persons apply in the case of the risk of a person being exposed to the Legionella bacteria.

### **H.2 CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH (COSHH) REGULATIONS**

Legionella pneumophila, listed as a biological agent, under in the regulations is defined as a 'substance hazardous to health'. Employers therefore need to undertake a health risk assessment wherever employees and others may be exposed to risks of contracting the disease.

Other duties on employers with respective preventing or controlling exposure are;

Regulation 8 - Use of control measures

Regulation 9 - Maintenance, examination and testing of control measures

Regulation 10 - Monitoring exposure

Regulation 11 - Health surveillance

Regulation 12 - The provision of information, instruction and training for employees apply.



### **H.3 NOTIFICATION OF COOLING TOWERS AND EVAPORATIVE CONDENSERS REGULATIONS 1992 (NECTR)**

The NECTR regulations require the notification to local authorities of wet cooling towers and evaporative condensers, which are components of many air conditioning systems found in large buildings, and of industrial cooling towers. Knowledge of the whereabouts of such equipment is of particular help to local authorities in the investigation of outbreaks of Legionnaires' disease. Notification entails completion of a standard form available from the local authority. Any changes to the information supplied in the form must be notified within one month. The local authority must also be informed, as soon as is reasonably practicable, when equipment ceases to be operational.

#### **i) Required Information on a Notification Form**

- The name of the operator and the address of the premises where the cooling towers and evaporative condensers are situated
- The number of such devices on site
- The name, address and telephone number of the person who has control of the premises
- Brief information on the whereabouts in the premises of the equipment

#### **ii) Checks to Enable Compliance with NECTR:**

1. Is there an evaporative condenser in operation in the workplace? Yes - go to (3) No - go to (2)
2. Is an air conditioning system of any sort in operation in the workplace? Yes - go to (3) No - go to (9)
3. Are you the person in control of the premises? Yes - go to (4) No - go to (7)
4. Does the system involve the use of wet cooling towers or the use of a heat exchanger cooled by contact with water passing through a stream of air? Yes - go to (5) No - go to (8)
5. Is the water exposed to air and are the water and electrical supplies connected to the system? Yes - go to (6) No - go to (9)
6. Have you notified the enforcing authority on an HSE approved form? Yes - go to (9) No - go to (10)
7. As a responsible employer, raise the matter with the landlord
8. No notification is necessary
9. No further action necessary but any changes must be notified within 28 days
10. Raise suggested Notification letter

**What Is Legionella Disease?**

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.



**How do people get it?**

Legionella bacteria are widespread in nature, mainly in water, for example ponds. Outbreaks occur from water systems where temperatures are warm enough to allow growth of the bacteria, for example in air conditioning cooling towers, evaporative condensers, whirlpool spas and sometimes water supplies in buildings. People catch Legionnaires' disease by inhaling small droplets of water suspended in the air, which contain the bacteria. Most people exposed to legionella do not become ill, and Legionnaires' disease does not spread from person to person.



**What are the symptoms?**

The symptoms of Legionnaires' disease are similar to those of flu: high temperature, fever and chills; cough; muscle pains; and headache. In a bad case there may also be pneumonia, and occasionally diarrhoea and signs of mental confusion.



**Conditions that increase the risk from legionella**

- Suitable temperature for growth, 20 to 45°C (at temperatures above 37°C the rate of multiplication increases, but ceases at 46°C. Below 37°C, it decreases and becomes insignificant below 20°C);
- A source of nutrients for the organism, e.g. sludge, scale, rust, algae, and other organic matter;
- The level of stagnation of water in the system; and
- A way of creating and spreading breathable droplets, e.g. the aerosol created by a cooling tower, spa pool, spray.



**Where does it come from?**

Legionella bacteria are widespread in nature, mainly living in natural water systems, e.g. rivers and ponds. However, the conditions are rarely right for people to catch the disease from these sources. Outbreaks of the illness occur from exposure to legionella growing in purpose-built systems where the water is maintained at a temperature high enough to encourage growth, e.g. cooling towers, evaporative condensers, spa pools, and hot water systems used in all sorts of premises (work and domestic). Most community outbreaks in the UK have been linked to installations such as cooling towers, which can spread droplets of water over a wide area. These are found as part of air-conditioning and industrial cooling systems. Fatal cases of Legionnaires' disease have also been associated with spa pool demonstrations.



**What measures are there to control legionella?**

To prevent exposure to the legionella bacteria, the Chief Executive must comply with legislation that requires the management, maintenance and treatment of water systems in LBB premises. This includes, but is not be limited to, appropriate water treatment and cleaning regimes. This responsibility is delegated to the "Responsible Person" who commissions the service of an approved competent contractor to manage the water systems on the Councils behalf.

Each premises must have a legionella risk assessment that should detail the scheme of works and measures to minimise the risk of legionella. This forms part of the water service log book that should be constantly updated with monthly water temperature measurements at various outlets points and contain emergency contact details of the Contractor and Responsible Person, an up to date plan of the water system (initialled & dated), scheme of works, certificate of disinfections, TMV in/out water temperatures, Contractor risk assessments and COSHH data sheets.

