

Legionnaires' Disease and Water Hygiene Procedures

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1.0 Introduction

This document complements the Warwickshire County Council (WCC) Legionnaires' Disease and Water Hygiene Policy by adding further detail to the roles, responsibilities and procedures for the management and control of legionella bacteria in water systems.

2.0 Background

Legionella bacteria can be found in low numbers naturally within all forms of water sources including domestic hot and cold water systems and will survive under a wide range of conditions and in temperatures ranging from 6°C and 60°C. The solution to the problem of Legionella control is therefore not to avoid Legionella organisms but to avoid the circumstances where it is likely that the organisms proliferate. The favourable conditions for Legionella growth is between 20°C and 45°C and where there is a supply of nutrients, which could exist as algae, amoebae and other bacteria. The presence of sediment, sludge, scale and similar matter can harbour bacteria and a biofilm (slime on the surfaces in contact with the water made up of a thin layer of micro-organisms) can protect Legionella from temperatures and concentrations of biocides that would otherwise destroy or inhibit its growth. In suspended form, they do not appear to multiply below 20°C and will be destroyed above 60°C.

Whilst water that is received through mains supply pipes from the water authority can be considered as safe to drink, the water quality can quickly become compromised unless care is taken over the condition water is stored and distributed in buildings. The ideal way to manage water hygiene is to use all of the water within a building within a 24-hour period. In that way, water can be kept hygienic by constant turnover and safe, fresh water can be brought in daily for each day's use. In practice however, this rapid turnover of water through water systems in buildings is not always achieved and if water is stored for many days without movement or use, bacterial colonisation may take place if conditions are suitable. The probability of colonisation will be higher if stored water temperatures favour bacterial growth and where there are nutrients present in the water system on which the bacteria can feed. If sufficient numbers of bacteria are present in water when consumed there will be a real risk of ill health effects to building occupants, visitors and others.

Legionnaires' disease is a form of pneumonia caused by inhaling airborne water droplets (aerosols), which are contaminated with bacterium of the Legionella species. The term used for this infection is legionellosis. There is no evidence to show that the disease can be contracted from someone who is already infected or from drinking water containing the bacterium.

Between 200 and 400 cases of legionellosis are reported in England and Wales each year, compared with 180,000 cases of pneumonia from all causes. It principally affects those who are susceptible due to age, illness, immuno-suppression, smoking etc and can be fatal. Most cases have been diagnosed in people aged between 40

and 70. Legionella can also cause less serious illnesses which are not fatal or permanently debilitating but which can affect all people.

The bacterium causing legionellosis can be found in most water systems, and the precise details of the means of contracting the disease are still a little speculative. However, the conditions necessary for the development and proliferation of the bacterium in the water system are known. These include:

- Dirty water systems – The presence of sludge, scale, rust, algae and organic matter;
- Water temperatures between 20-45⁰C - Legionella will multiply fastest at 35-37⁰C. It will be killed at water temperatures above 60⁰C. Below 20⁰C it will stay dormant but will grow if the water temperature is raised and other conditions are favourable.

The aim is to reduce the risk to an acceptable level by controlling the conditions necessary for proliferation of the Legionella bacterium and all other common water borne bacteria. In practice this means:

- Keeping the hot water storage temperature at greater than 60⁰C, or fitting a water treatment system;
- Ensuring hot water distribution temperatures are above 50⁰C, or fitting a water treatment system;
- Maintaining cold water temperatures at less than 20⁰C;
- Keeping water systems clean and in good condition;
- Controlling contamination of the water systems;
- Preventing stagnation due to the unnecessary storage of water;
- Where fitted, maintaining and keeping in good working order any water treatment systems installed.

In order to achieve this aim a programme of detailed legionellosis risk assessments of all Council properties has been undertaken by competent persons accredited under Legionella Control Association. A systematic questionnaire is applied to the water systems, with particular reference to the factors which influence proliferation of the bacterium (i.e. cleanliness, condition, temperature, etc.). The survey results are used to produce recommendations for the control of the bacterium.

Once the work is complete it will be necessary to monitor certain parameters to ensure that the effectiveness of the control measures taken does not reduce with time. For the establishments this will principally mean the Site Responsible Person ensuring monitoring, recording and reporting water temperatures back to WCC Property Support Group.

3.0 Roles and Responsibilities

Chart 1 below outlines the organisational responsibilities for the management and control of legionella risks. The responsibilities and actions to be undertaken by the specified persons are detailed below in section 3.1.

Chart 2 outlines the Legionella Control Committee membership. This committee meets annually.

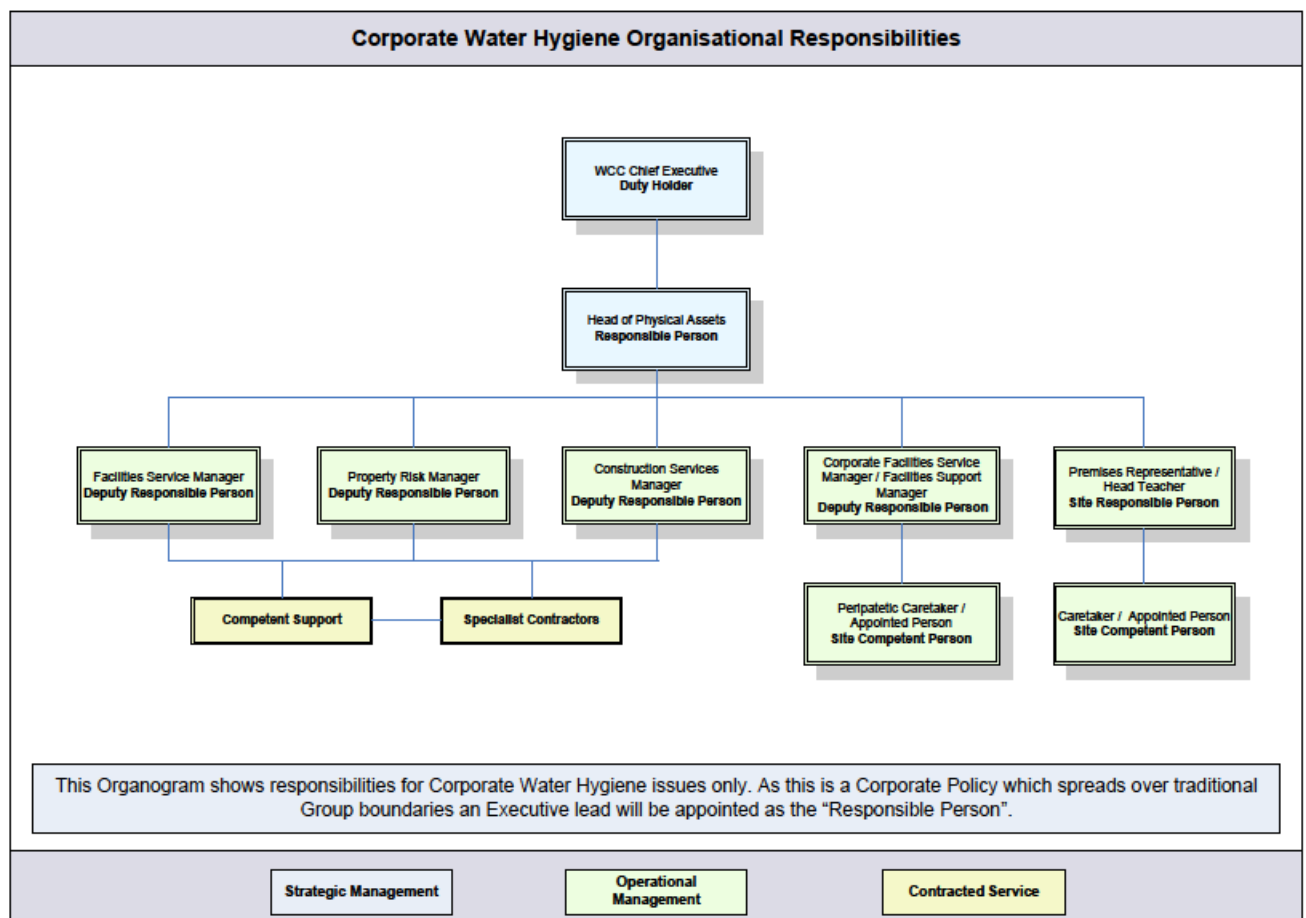


Chart 1: Corporate Water Hygiene Organisational Responsibilities Organogram

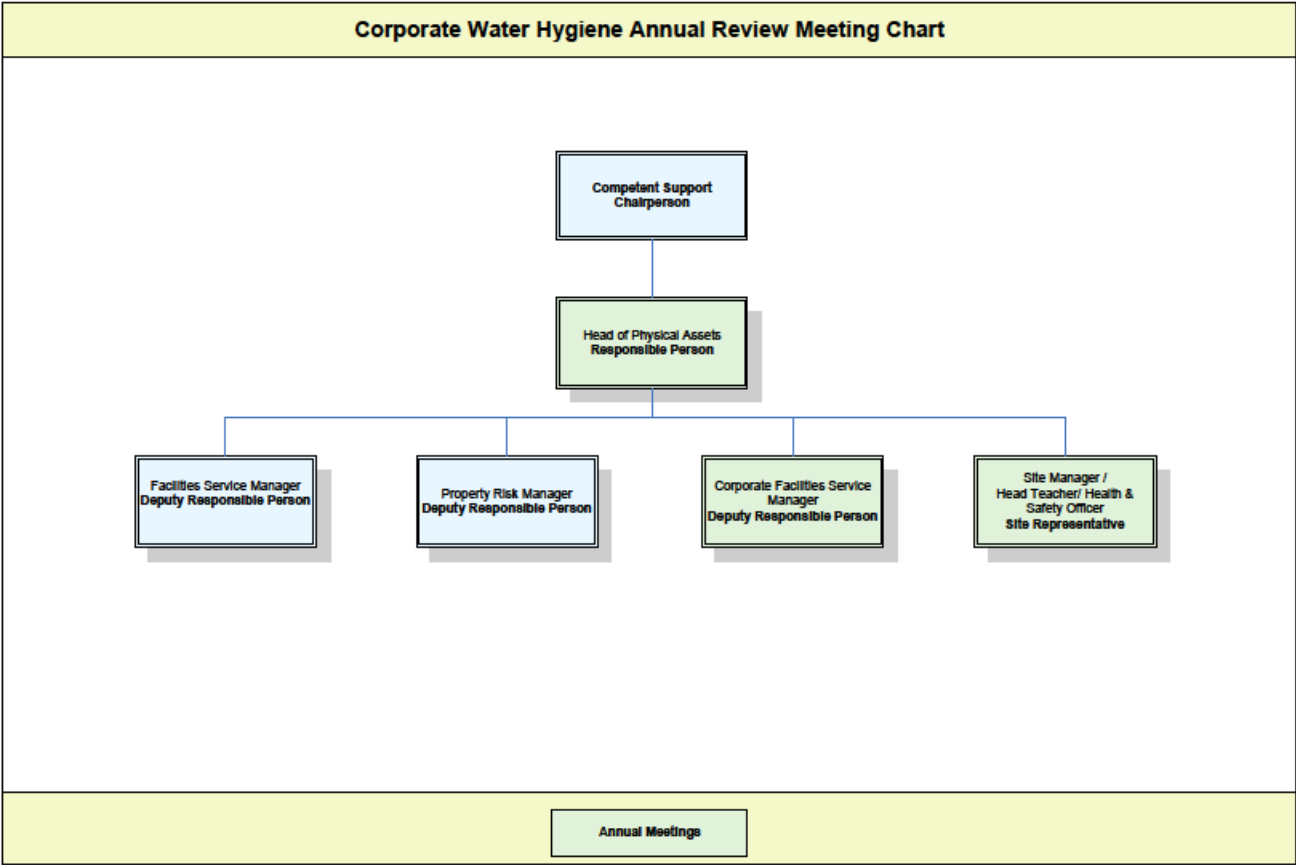


Chart 2: Legionella Control Committee Organogram

3.1 Roles, Responsibilities and Posts

Statutory Duty Holder -

WCC Chief Executive

The Chief Executive has overall responsibility throughout the County Council for implementing and achieving the objectives of the health and safety policy statement and to this effect is the person with whom ultimately the duty is placed with regards to water hygiene.

The County Council has delegated to the Chief Executive the responsibility for monitoring that Chief Officers comply with WCC's Health and Safety Policy.

The Chief Executive requires Strategic Directors to provide regular information on health and safety performance regarding the Services of the County Council under their control.

The Chief Executive will delegate in writing, the monitoring, reviewing and auditing as required under this policy to the 'Responsible Person'.

Responsible Person -

Head of Physical Assets

The Responsible Person shall have responsibility for the development and implementation of the policy corporately, and the allocation of adequate resources for the management of Legionellosis risk within County Council occupied buildings.

In conjunction with the Deputy Responsible Persons responsibility will also include developing and implementing training programmes for all Premises Representatives (Site Responsible Persons), County Council employees who are likely to come into contact with Legionella sp. or who plan, manage or implement works that may involve Legionellosis risk.

Deputy Responsible Persons –

Facilities Service Manager / Construction Services Manager / Property Risk Manager / Corporate Facilities Service Manager

In conjunction with the Responsible Person, responsibility shall include developing and implementing training programmes for all Premises Representatives (Site Responsible Persons), County Council employees who are likely to come into contact with Legionella sp. or who plan, manage or implement works that may involve Legionellosis risk.

The Deputy Responsible Persons are the people within Physical Assets Service with whom the duty is placed in order to:

- i. Ensure that any contractor employed to work on behalf of Physical Assets on the water systems works in accordance with this document and completes the Water Hygiene Log Book at each site.
- ii. Manage risk assessment implementation and Legionella survey, testing, remedial and risk minimisation programmes. Will maintain the central Legionellosis Database, and issue Premises Legionellosis Registers and their revisions. Perform management priority risk assessments; carry out the day-to-day liaison with the appointed Specialist Legionellosis Risk Management Consultants for water sampling and remedial work.
- iii. Ensure that adequate resources are available for those that work under Physical Assets direction to enable them to undertake any monitoring, inspection, testing, maintenance and cleaning requirements, and highlight to the Responsible Person any additional resources required.
- iv. Ensure that there are adequate competent staff within Physical Assets to support this role and that the staff are aware of their responsibilities under this policy;
- v. Ensure that only those whom are deemed competent work on the water systems and deliver training to those that have specific responsibilities in relation to water hygiene.
- vi. Ensure specialist monitoring is carried out.

Site Responsible Persons -

Facilities Manager/Head Teacher/Site Manager

The most senior person on the premises with health and safety responsibilities is required to;

- i. Ensure that adequate resources are made available to enable water monitoring to be carried out on the premises to which they are responsible
- ii. Appoint, in writing, a competent person(s) for carrying out water hygiene monitoring work in accordance with this policy
- iii. Ensure that sufficient competent person(s) are trained in order to carry out the role;
- iv. Ensure that the health and safety arrangements for the premises takes into account the additional responsibilities and arrangements of this procedures document
- v. Ensure that WCC equipment is maintained in-house or by contractors to standards necessary for the control of Legionella
- vi. Ensure that any contractor working on the water system takes into consideration the requirements of the Health and Safety Executive's (HSE) Approved Code of Practice & Guidance L8, '*Legionnaire's Disease, The control of Legionella bacteria in water systems*' and that only approved fittings are used as required by the Water Supply (Water Fittings) Regulations 1999 and relevant British Standards
- vii. Ensure that the Water Hygiene Log Book is made available to any contractor working on the water system on the premises in order to ensure that relevant information is completed

- viii. Ensure that monitoring is carried out in accordance with the recommendations of the Water Hygiene Risk Assessment and that the Water Hygiene Log Book is maintained and up to date
- ix. Ensure that any proposed alterations/modifications or additions to the water system are reported to Physical Assets via the Mechanical Services Engineer for approval prior to any works taking place. This will enable a competent person to comment on the use of materials, design, etc.,
- x. Ensure that modifications/alterations or additions to the water system are NOT carried out prior to receipt of approval from Physical Assets
- xi. Ensure that other persons that may be affected by any remedial works carried out on the property's water systems are taken into consideration prior to works being commissioned and that advice is sought where necessary (this could include employees, pupils, visitors/public, contractors, those using the premises under a letting arrangement etc.)
- xii. Ensure reporting of incidents under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 - RIDDOR (see section 6 of this policy for more guidance)
- xiii. Regularly review that the procedures are being carried out in accordance with this policy document. See Table 1 Summary of Responsibilities
- xiv. Complete the Check Sheet (appendix A), annually as a minimum. Any non-conformities must be reported to the Property Risk Team

Site Competent Person -

Premises Representative/Site Manager/Caretaker

The Premises Representative/Site Manager/Caretaker (or other person delegated or employed to carry out this role) will be notified in writing that they are deemed the 'Site Competent Person' for that site by the Site Responsible Person (person with overall health and safety responsibilities at the property). It is expected that as a minimum the Site Competent Person will have received the necessary training as delivered by the Corporate Facilities Service and will receive refresher training at least every 3 years. The Site Competent Person(s) is responsible for:

- i. Carrying out checks/monitoring as recommended within the Water Hygiene Log Book and ensuring that adequate records are maintained e.g. flushing of outlets, temperature monitoring of hot and cold water outlets and pipework (where thermostatic mixer valves are fitted) and ensure that during periods of absence these continue to be carried out. Where this is not possible seek advice from the Property Risk Team. This includes for example, when properties are closed for summer breaks and other holiday periods, ensuring that problems are reported to the Site Responsible Person for the particular property and Physical Assets as early as possible (ensuring that a record is entered within the log book stating what actions have been taken);
- ii. Ensuring that contractors who work on the water system complete the Water Hygiene Log Books where required;
- iii. Cooperating with Physical Assets staff and specialist nominated Legionella contractors when checks on the systems and re-inspections are carried out.

There is further advice and guidance for Premises Representatives in the Building Occupancy Guide for Premises Representatives which can be found on the WCC intranet.

Specialist Legionella Contractor

The Specialist Legionella Contractor will be selected by those working under the instruction of the Deputy Responsible Person. The Legionella contractor will be required to be a member of The Legionella Control Association and will be required to;

- i. Carry out water hygiene risk assessments in accordance with the requirements of the Health and Safety Executive's (HSE) Approved Code of Practice & Guidance L8, '*Legionnaire's Disease, The control of Legionella bacteria in water systems*' and BS8580:2010 Water quality. Risk assessments for Legionella control. Code of practice. The risk assessments will identify the engineering remedial work that is required to prevent or minimise the risk of Legionella and the ongoing monitoring requirements that will be required;
- ii. Where not already established, the Specialist Legionella Contractor will prepare an asset register and provide labelling to all items of plant and equipment associated with water hygiene to enable easy identification on plans/schematics and for future reference purposes;
- iii. Produce and deliver Water Hygiene Log Books. The Log Books will specify the ongoing monitoring requirements and will provide record sheets for the recording of all work carried out that may affect water hygiene including remedial works, cleaning/disinfections, modifications to the water system, testing, servicing and day-to-day monitoring;
- iv. Deliver training to those with responsibilities to monitor water hygiene at their premises. Certificates will be provided to all those that have received such training to demonstrate competence;
- v. Routine testing of water quality (where required) and completion of relevant details within the Water Hygiene Log Book;
- vi. Advise the Site Responsible Person as soon as reasonably practicable of water hygiene concerns found during routine site visits and following water quality sampling that need immediate attention;
- vii. Provide specialist water hygiene advice and guidance.

Specialist Legionella Consultant

The Specialist Legionella Consultant will be a member of the Legionella Control Association and be selected by those working under the instruction of the Deputy Responsible Person. The Legionella Consultant will be required to:

- I. Pro-actively introduce issues to the Legionella Control Committee (see organogram) on issues that they should be addressing, such as technical material, new legislation and any meetings of relevance;
- II. Review progress of the implementation of the risk minimisation scheme.
- III. Review client monitoring data and feedback;

- IV. Review Legionellosis Policy and Procedures and revise where necessary.
- V. Perform an annual audit of the legionellosis risk management system and make recommendations;
- VI. Carry out Legionella awareness training sessions.

General Contractors and Sub-contractors

General contractors and subcontractors commissioned through Physical Assets (or where they are procured independently) will be required to:

- i. Carry out remedial work on behalf of WCC as recommended by the risk assessment/as requested by the Mechanical Services Engineers and Project Managers and as all relevant British Standards
- ii. Carry out installation/modification work as required by Mechanical Services Engineers, Project Managers and Designers;
- iii. Conduct disinfections of the water system and associated testing of water quality (where required);
- iv. Provide certificates of disinfections/chlorination's, modifications and new works as specified within the works specification;
- v. Complete records within the Water Hygiene Log Book where any works have taken place that could affect the water system on the premises.
- vi. Any contractor working on a water system but not directly involved in Legionella control e.g. general plumbing, must be a member of an appropriate approved plumber scheme

Overall daily management responsibilities will normally be placed on and co-ordinated by the relevant manager of the premises containing the relevant water system/s however, this is intended to be a **supported responsibility** with a view to maximum overall effectiveness and efficient use of resources.

The table provided below demonstrates how the responsibilities are shared between Physical Assets Service and the Site Management Team.

Table 1 Summary of Responsibilities

Physical Assets Service (for overall building management)	Facilities Manager/ Head Teacher / Site Manager/
Ensure that all Physical Assets staff that hold specific responsibilities for water hygiene are aware of and understand their duties.	Ensure that all staff that hold specific responsibilities for water hygiene are aware of and understand their duties.
Appointment of competent staff to undertake roles in relation to water hygiene and ensure that existing and new staff are trained to undertake their	Appointment of competent staff to undertake roles in relation to water hygiene and ensure that sufficient existing and new staff are trained to

duties.	undertake their duties.
Review of the policy and procedures on a regular basis.	Annual review by person with overall health and safety responsibilities that the Water Hygiene Log Book is being completed and that appropriate actions are being taken to reduce Legionella risk. These documents must be made available to all service contractors and others required to work with the water system
Generation of Risk Assessments and Water Hygiene Log Books for all WCC premises	Monthly, weekly and daily monitoring of the water system at the property as recommended by the risk assessment
Assistance/provision of training to premises staff who have responsibilities under this policy	6-monthly checks on all outlets for scale build up. Outlets to be cleaned by nominated contractor.
Ensure engineering remedial actions as recommended by the risk assessments are carried out	Annual accuracy check of thermometers used for measuring water temperatures and pipework temperatures
Review of all modifications/alterations /additions to water systems on WCC premises and where requested/required, involvement in undertaking this work.	Notification to Physical Assets of any proposed alteration/ modification/addition to the water system so that advice can be provided and to enable records to be updated including schematic drawings and possible review of Risk Assessment etc.
Review of Risk Assessments following notification of or involvement with significant changes to the water systems and at least every 2 or 4 years (depending on level of risk).	Arrangement for disinfection/ chlorination following any work that has been undertaken that has affected the water system
Arrangement and management of service contracts for quarterly, six-monthly and annual monitoring and maintenance.	To cooperate with Physical Assets and their contractors when they attend site.
Ensure that all works carried out to the water system conforms to current good practice, that only approved fittings are used and that all relevant details are incorporated into the Water Hygiene Log Book.	Ensure that an enhanced flushing regime is put into place during any periods of absence from the property (e.g. school holidays)
	Report water hygiene related defects to Facilities Hotline or if not in Indemnity Scheme have appropriate procedures in place.

4.0 Risk Assessments and Water Hygiene Log Books

An initial set of Risk Assessments have been carried out at all properties that were considered to have a Legionella risk based upon susceptibility factors and knowledge of relevant aerosol producing water systems following the Health and Safety Executive's (HSE) Approved Code of Practice & Guidance L8, '*Legionnaire's Disease, The control of Legionella bacteria in water systems*'.

Risk Assessments will be undertaken by a Consultant registered under the "Legionella Control Association" as specified in L8. All consultants conducting such surveys will be independent of any remedial work or other associated services.

Risk Assessments will be conducted in all premises as part of a 2 or 4 year rolling programme (or more frequently if there is reason to believe that the assessment is no longer valid e.g. due to a significant system change or change of use of the building) and a monitoring and maintenance regime implemented. All Risk Assessments will be carried out under the instruction of Physical Assets. The programme will be subject to review periodically under the advice of the specialist Legionellosis Risk Management Consultants.

The Risk Assessments will recommend remedial actions to be taken where there is the potential of risk for the proliferation of Legionella bacteria. Recommendations may include remedial engineering works, implementation of monitoring regimes, general housekeeping actions and recommendations for the frequency of visits for specialist monitoring.

Following the Risk Assessment a site-specific Water Hygiene Log Book detailing the specific monitoring requirements and information/instruction on how to carry out the tasks required will be available to the relevant manager at the site via AtlasWeb (Site Responsible Person and/or Competent Person) so that the information contained within it can be disseminated to those that have responsibilities for water hygiene management.

The Risk Assessments and Water Hygiene Log Books should be held on the premises alongside other health and safety information and records and shall be made available for inspection if requested. For shared sites it is recommended that these Risk Assessments and Log Books are maintained in a central location and that appropriate occupants within the property know where to find them.

The latest Risk Assessment for each property can be found via the AtlasWeb system.

Legionella Risk and the Conflict with Scalding Temperatures at Hot Water Outlets

RISK OF SCALDING

At temperatures above 43⁰C there is a danger of scalding which increases with temperature. The risk depends on temperature and time of contact and will be greater for the following groups of people: -

- Young children of nursery and foundation stage age
- The elderly
- Persons with sensory impairment

Under normal circumstances the exposure of most other people to the temperatures of hot water and surfaces found in WCC buildings does not present a significant risk.

The extent of scalding risk control measures necessary depends on the vulnerability of the occupants at each property. For the purposes of the on-site Risk Assessment study, in order to determine vulnerability, three broad scalding risk categories shall be adopted - **high, medium and low**. Categorisation is made on the basis of the property use and the nature of its occupants.

The guidance recommends that a formal Risk Assessment should be made of outlets and surfaces to enable the production of an action plan or risk minimisation scheme. Properties will be assessed on a priority basis and you will be informed whether your property is to be included. The scalding risk assessment report provides a risk minimisation scheme similar to the legionellosis scheme. This scheme identifies areas that do not meet the recommendations and includes a prioritised plan of action.

Fire Hose Reels

Where, during the Risk Assessment, it is identified that fire hose reels are located within WCC owned/managed buildings, it will be WCC's policy to carry out, so far as is reasonably practicable, removal of these and ensure that appropriate alternative means to fight fire are put into place. Consultation will, if necessary, be carried out with Warwickshire Fire and Rescue Service prior to removal of any fixed fire fighting equipment.

Swimming Pools / Hydro Pools

Swimming pools and hydro pools are the responsibility of the Site Responsible Person to ensure they are correctly maintained and serviced to the relevant standards.

5.0 Maintenance Works and Monitoring

Contractors that are used to carry out system inspection and cleaning/disinfection work will be members of the Legionella Control Association.

Contractors used to carry out remedial works shall be of “approved plumber” status under the Water Supply (Water Fittings) Regulations, 1999 and to ensure that all work is in compliance with these and any other regulations, all contractors shall use only materials that are listed in the latest edition of the WRc / WRAS “Approved Fittings / Materials Directory”.

Typical monitoring activities to be expected (unless deemed otherwise within the Water Hygiene Risk Assessment and Log Book) are provided in the following table. Where any activity is carried out, a suitable record shall be made and any certificates of chlorination etc., inserted into the Log Book.

For any water systems not listed in these procedures e.g. rainwater harvesting; water features etc. please refer to the manufacturer’s specific recommendations and legionella risk assessment.

Table 2 Typical Maintenance Requirements for Hot and Cold Water Services (inc showers):

Frequency	Service	Maintenance Requirement	Responsibility
Weekly	Hot water	Alternate hot water service secondary circulation pumps if more than one is fitted	Competent Person on site
Weekly	Hot water	Flush through all hot water outlets in remote and infrequently used areas.	Competent Person on site
Weekly	Cold water	Flush through all cold water outlets in remote and infrequently used areas.	Competent Person on site
Monthly	Hot water	Check water temperatures in flow and return at calorifiers. Flow water temperature should be 60°C and return water temperature should be no less than 50°C.	Competent Person on site
Monthly	Hot water	Check accuracy of temperature gauges where fitted on the calorifier body, flow and return pipework.	Competent Person on site
Monthly	Hot water	Check water temperatures at sentinel and a representative number of intermediate outlets. Temperature results should be between 50°C and 60°C within one minute of flushing. If thermostatic mixer valves (TMVs) are fitted a surface temperature probe should be used to verify the temperature of the distributed water prior to the TMV.	Competent Person on site
Monthly	Cold water	Check that temperature at sentinel and a representative number of intermediate outlets are below 20°C after running the water for up to two minutes.	Competent Person on site
Quarterly (or as required)	Shower Heads	Dismantle, clean and descale heads and hoses	Physical Assets to employ competent contractor
6-monthly	Cold water	Check all outlets for scale build up and clean as necessary.	Competent Person on site.
6-monthly	Cold water	Check tank water temperature remote from ball valve and mains temperatures at ball valve. One of these tests must be carried out during the summer months.	Physical Assets to employ competent contractor.
6 Monthly	Fire hose reels [▽]	Tests of hose reels to be carried out ensuring no exposure to aerosols	Physical Assets to employ competent contractor
6-monthly	Hot water	Run water from calorifier base for up to two minutes to expel sedimentation build up. Measure drain water temperature. Drain water temperature should be at or above 60°C	Physical Assets to employ competent contractor
Annually	Hot water	Where provision of 'safe' hot water is	Physical Assets

[▽] Refer to section 4.0 regarding the future of fire hose reels within WCC owned properties

Table 2 Typical Maintenance Requirements for Hot and Cold Water Services (inc showers):

Frequency	Service	Maintenance Requirement	Responsibility
		essential, the thermostatic mixer valves should be serviced.	to employ competent contractor
Annually	Hot water	Inspect calorifiers internally, clean and descale as necessary. Following internal cleaning the calorifier to be disinfected or alternatively pasteurised.	Physical Assets to employ competent contractor
Annually	Cold water	Visually inspect cold water storage tanks and carry out necessary remedial works e.g. clean and chlorination.	Physical Assets to employ competent contractor
As necessary*	Cold water	Arrange for samples to be taken from remote and little used outlets for laboratory analysis for Legionella and Total Viable Counts (TVC's)	Physical Assets to employ specialist Legionella contractor
As necessary*	Hot water	Arrange for samples to be taken from hot water calorifier base and analysed for Legionella and TVCs	Physical Assets to employ specialist Legionella contractor

Any other water systems will be subject to Risk Assessment and when required, control measures recommended detailing frequencies and responsibilities. Other systems may include; spa baths, showers, water fountains, air handling systems with chilling. This list is not exhaustive.

* See Section 6.0, 'Water Sampling' which explains when samples of the water system will be taken for laboratory analysis

6.0 Water Sampling

Legionella samples will not be taken routinely as part of the risk assessment as stated in L8. Samples for metals and **Legionella sp.** will only be taken where specifically required:

- In water systems treated with biocides where storage and distribution temperatures are reduced (<60°C in DHW heaters with a capacity > 100L). These samples will be taken on a monthly basis. The frequency of testing should be reviewed after a year and may be reduced when confidence in the efficacy of the biocide regime has been established.
- In systems where the control levels of the treatment regime (e.g. temperature, biocide level) are not being consistently achieved. As well as

carrying out a thorough review of the system and treatment regime, frequent samples e.g. weekly, should be taken until the system is brought back under control.

- When an outbreak is suspected or has been identified.
- In areas of WCC premises with 'at risk' persons e.g. those with immunologically compromised.

In the event of any of the above being recorded by a Competent Person (either employed through Physical Assets or on-site staff), Physical Assets will be notified via the Facilities Hotline. Advice and guidance will then be offered by specialist staff employed by the Deputy Responsible Person within Physical Assets and where necessary appropriate specialist Legionella contractors will be appointed to carry out remedial action. A review of the risk assessment may also be necessary following such a report being made.

Water samples shall be taken in accordance with BS7592:1992 (*Sampling for Legionella organisms in water and related materials*) and the analysis of samples conducted by a UKAS accredited laboratory. Legionella bacteria and/or TVC results will be reported to the Property Risk Team within Physical Assets, who will then offer reassurance to the Site Responsible Person at the relevant property and discuss what remedial actions may be necessary, if any.

All certificates of analysis will be held within the Water Hygiene Log Book.

7.0 Actions to be Taken in the Event that Legionella is Detected

Where water sampling indicates that Legionella bacteria are present within the water system the following actions will be carried out by a suitably qualified person/appointed specialist:

Legionella Bacteria (cfu/litre)	Action required
More than 100 but less than 1000	<ul style="list-style-type: none"> • System to be re-sampled to determine extent of bacterial presence • Irrespective of serogroup identified (1 to 14), an immediate review of the control measures and risk assessment will be carried out and disinfection of the system considered (via chemical or thermal means).
More than 1000	<ul style="list-style-type: none"> • The system should be re-sampled and an immediate review of the control measures and risk assessment carried out to identify any remedial actions, including possible disinfection of the system.

Where the results are considered to be significant, the Site Responsible Person at the premises will be notified by Physical Assets and details provided as to what remedial actions will be necessary to minimise any risk. Where possible, this will

involve thermal pasteurisation manually by the authorised Competent Person on site. Chemical sterilisation of the area affected or the entire system will otherwise be carried out dependent upon the severity and extent of bacterial proliferation. Additional control measures will be put into place as necessary to ensure that additional risks are not introduced to any person at the site who may be affected by the pasteurisation or chemical treatment of the water system.

Following any remedial work, water samples will be gathered from representative areas of the system to confirm that the actions taken have been effective. All water sampling documentation and actions taken (including water test results/certificates) must be retained/recorded within the Water Hygiene Log Book on site and with Physical Assets for legislative and auditing purposes.

8.0 Actions to be Taken in the Event of a Legionella Outbreak

Where a medical practitioner reports a diagnosis of legionellosis or 'Legionnaires Disease' in an employee whose current job involves working on or near cooling systems that use water, or hot water service systems in the workplace, the Health, Safety & Wellbeing Service of WCC must be notified as soon as practically possible and by the quickest possible means, so that appropriate reporting to the HSE can take place. *Legionnaire's Disease is a reportable disease under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) and as such, notification should be made via Warwickshire County Council's accident/incident reporting system so that the appropriate member of staff is made aware and can take appropriate action.*

Upon notification via the accident/incident reporting system, the Health, Safety & Wellbeing Service will contact the local Consultant in Communicable Disease Control (CCDC).

In accordance with the Health and Safety Executive's (HSE) Approved Code of Practice & Guidance L8, '*Legionnaire's Disease, The control of Legionella bacteria in water systems*', the Consultant in Communicable Disease Control (CCDC), who is appointed by the local authority under Public Health legislation, will determine whether there is an 'outbreak' as defined by the Public Health Laboratory Service (PHLS)¹.

An outbreak is defined as 2 or more cases in close proximity within 6 months for which there is strong epidemiological evidence of a common source of infection (PHLS definition). Where there is considered to be an 'outbreak' an investigation will follow its declaration. Requests may then recommend that processes/water systems are shut down where they are suspected of being the cause, whilst a full investigation takes place. Such investigations are likely to involve the HSE and

¹ In accordance with ACOP L8, an outbreak is defined as two or more confirmed cases of legionellosis occurring in the same locality within a six-month period. Location is defined in terms of the geographical proximity of the cases and requires a degree of judgement (as made by the 'Proper Officer')

CCDC (or Environmental Health Officer (EHO) working on their behalf) and will require the full cooperation of any other member of staff who holds a responsibility for the control of Legionella at the property concerned.

It should be noted that the reporting of Legionnaire's Disease by a WCC employee is considered highly unlikely. It is more probable that it will be the HSE/CCDC (or EHO working on their behalf) who will contact WCC in order to undertake an investigation following notification of Legionnaire's Disease by other reporting means.

Where an 'outbreak' is declared, the Service Health and Safety staff member concerned will notify the Corporate Health, Safety and Wellbeing Manager and Physical Assets Health and Safety staff member. The Emergency Planning Officer will then be contacted so that members of staff are prepared for an investigation to take place.

The HSE or the Local Authority Environmental Health Department may also be involved in investigating compliance with health and safety legislation.

9.0 Primary Contact List

Property Risk Team – 01926 476850
propertyrisk@warwickshire.gov.uk

Appendix A

Site Responsible Person Check Sheet

WATER HYGIENE RISK MANAGEMENT
Site Responsible Person – Review Check Sheet

SITE:		UPRN:	
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Site Responsible Person(s)

	Name & Job Title	Date of training last completed and by whom
Name of Site Responsible Person		
Name of Site Competent Person		

Record Keeping & Risk Assessments – (Check on Atlas to see if the most current version is printed)

	Hard Copy Present – Yes/No	Action Required / Completed
Water hygiene logbook		
Legionella risk assessment (RA) – survey date		
Any significant water system changes since previous RA		
Water drawing schematic & floor plans		
Water hygiene policy and procedures		

Routine Monitoring Check

TASK	Frequency	Completed By	Action Required
Flushing of infrequently used outlets	Weekly		
Hot and Cold temperatures taken from sentinel outlets plus approx. 10% of other outlets.	Monthly		
Temperatures taken from calorifiers (water heaters) flow and return.	Monthly		

Routine Monitoring Check – Service Contract

Quarterly shower head & hose clean and disinfection.	Quarterly		
Incoming cold water temperature and tank temperature.	Annual (Summer)		
Internal inspection of calorifier and cold water storage tanks.	Annual		

Auditor Details

Completed By:	
Date of Audit:	