



Health, Safety and Wellbeing Management Arrangements

Core | Consider | Complex

Water System Safety

(Control of legionellosis/excessive water temperatures)

Fierté Multi Academy Trust

Water Monitoring and Safety

2018-2019

Health, Safety and Wellbeing Service

Success Indicators

The following indicators will demonstrate the level of compliance with this management arrangement and its procedures:

- a) Each premises will have a water system risk assessment and record system manual (log book). Premises with manuals that are past their renewal date or no longer reflect the system on site, should contact the Entrust Risk Management Team.
- b) Responsible Person/Premises Managers are aware of their responsibilities; the management arrangements for water system safety; content of the risk assessment and record system manual.
- c) Risk assessment will be reviewed by a competent contractor at the agreed risk rated interval for the property type.
- d) Risk assessment recommendations are actioned to manage risks identified and to ensure adequate controls are in place.
- e) 6 monthly inspection of water system safety completed by a competent contractor.
- f) Hot and cold water temperatures are adequately controlled and monitored.
- g) Outlets are protected to prevent scalding risks to vulnerable users.
- h) Control measures reviewed if positive Legionella bacteria are detected.
- i) Water system/temperature checks and cleaning are undertaken to recommended timescales.
- j) Decommissioning and recommissioning procedures followed when premises are closed/re-opened.
- k) Contractors involved in work on the heating/water system refer to the record system manual and record any work undertaken.

1. Application

This policy applies to all County Council workplaces and premises where the council has retained the landlord maintenance responsibilities.

2. Introduction

This document provides information and guidance to managers and staff on the Council's policy and arrangements for ensuring that all County Council workplaces have arrangements in place to prevent exposure of occupants to legionella bacteria and excessive water temperatures.

Legionella and Legionnaires Disease

What is Legionella?

Legionella is a bacteria which is common in natural water systems (such as streams, lakes, etc.) and in man-made hot and cold water systems (storage tanks, pipework, taps and showers, etc.).

The bacterium can survive at low temperatures but special conditions are needed in water systems before the bacterium multiplies and thrives. They require both a food source (e.g. the presence of sludge, scale, rust, algae or organic matter) and a water temperature in the range 20°C and 45°C. They proliferate between the temperatures of

20°C and 45°C and control of temperatures is the main method used for controlling the bacteria in domestic water systems.

Legionellosis is the name given to a group of illnesses caused by Legionella bacteria - the most serious and well known being Legionnaires' disease. Legionnaires' disease results in Pneumonia like symptoms, which in some instances may prove fatal; symptoms include high fever, chills, headache and severe muscular ache. This is followed by a dry cough and difficulty with breathing.

Who are most at risk?

Those most at risk include the elderly and infirm, smokers, alcoholics, and those suffering from cancer, diabetes, chronic respiratory disease, kidney disease or those with immunological deficiency.

How are people infected?

Anyone can get a legionella infection. Infection is caused by breathing tiny airborne droplets of water contaminated by the bacteria. Any water application that causes the release of contaminated aerosols into the surrounding area can transmit Legionella bacteria. The bacteria have been proved to be transmitted by wet air conditioning plant, cooling towers, evaporative condensers, showers, taps, humidifiers which create a spray of water droplets, decorative fountains, whirlpool baths, hydrotherapy baths, showers, taps, etc.

There is no evidence of person to person transfer of the disease.

Scalding - The risk from scalding

Scalding may occur in many situations in all types of buildings and applications, the degree of potential scalding depends on the water temperature, contact time, susceptibility of individuals and the volume of water delivered.

At 50°C, the risk of scalding is small for most people but the risk increases rapidly with higher temperatures and for longer exposure times.

However, the risk particularly to the very young, very elderly, infirm, or significant mentally or physically disabled or those with sensory loss (who may not be able to recognise high temperatures or respond appropriately or quickly) is higher. Fatal accidents have occurred in the case of whole-body immersion of vulnerable people in baths and showers.

The Conflict of Interest

In order to control the growth and multiplication of Legionella bacteria, it is necessary to raise hot water temperatures to a level which significantly increases the risk of scalding. In order to address this increased risk it is necessary to implement precautionary measures to hot water outlets.

There is also some conflict with the desire to minimise energy usage and CO₂ emissions and the need to maintain hot water temperatures. **The legal requirement to maintain hot water temperatures must always take precedent over energy saving measures.**

There are however areas where the two aims are perfectly aligned e.g. insulating

pipework and calorifiers effectively to prevent heat gain/loss to maintain water temperatures will also minimise energy usage.

3. Aims & Objectives

To minimise the risk of exposure to Legionella bacteria in water systems, and the risk of scalding through contact with excessively hot water.

4. Arrangements for Applying The Policy

4.1. Appointment of Duty Holders and Responsible Persons.

The Council has delegated the “duty holder” responsibilities to the County Council Senior Leadership Team (SLT) who are required to work within these management arrangements and ensure the availability of the resources to enable this. All premises will have an appointed premises manager to act as the Responsible Person for the implementation of these arrangements.

4.2 Risk Assessment

Water hygiene consultants are appointed by the Strategic Property Team to undertake a risk assessment of the water systems within all Staffordshire County Council premises where the council holds landlord obligations.

The purpose of the risk assessment is to identify any areas in the water system that present a hazard to the occupants of the establishment.

In order to provide a risk assessment it will be necessary for a survey to be undertaken of the entire domestic hot and cold water systems within an establishment. This will be used to assess the potential of exposure of persons to Legionella bacteria and excessive water temperatures. It will also make recommendations where necessary to comply with current legislation in order to reduce the possibility of external contamination and bacteria growth within the systems.

The risk assessment and log book will be provided to each premises and must be kept up to date and available for consultation at all times by persons who may need access to the information it contains.

The premises manager must identify any work activity which produces a water aerosol or risk of scalding in their establishment and ensure that they are subject to a risk assessment. They must identify to the contractor completing the water hygiene risk assessment any person using the building who is deemed to be particularly susceptible.

Premises managers should complete a risk assessment of hot surface temperatures caused by exposed pipe work so that suitable control measures can be taken to protect vulnerable individuals.

Risk Assessment Review

To ensure records are kept up to date, the Entrust Property Risk Management Team will arrange for the water system risk assessment to be reviewed on a risk rated basis for each property type in accordance with the following frequencies:

- **High Risk** e.g. residential care homes for the elderly and infirm, Day Centres and Day Services- Annually.
- **Medium Risk** e.g. Schools, Leisure Centres and properties with high risk outlets- once every two years
- **Low Risk** e.g. Offices, Libraries and other properties without high risk outlets- once every 3 years.

It may also be necessary to carry out ad hoc risk assessment reviews when the risk assessment is believed to no longer be valid, for example following major refurbishment works or changes of use to the building. Where such changes have taken place, the premises manager must contact the Entrust Risk Management Team to confirm that a review is required.

4.3. Water Hygiene Records

The Entrust Risk Management Team will arrange for each premises to be provided with a copy of the risk assessment and a log book containing the following:

- Confirmation of the “responsible person(s)”, their deputies, their duties and any tasks delegated to other personnel under their control.
- Schematic diagram of the water systems.
- Any necessary precautionary measures and remedial works **required as a result of the risk assessment.**
- Routine monitoring record sheets.
- Provision for recording all inspections and work undertaken by contractors or site personnel on the water systems.

All water hygiene consultant inspection reports and records must be filed in the appropriate section of the manual, which need to be retained for at least 5 years.

4.4. Servicing and Testing (Water Hygiene Consultants)

Water Hygiene consultants will be appointed by the Strategic Property Team in order to carry out 6 monthly inspections and report the condition of water systems at individual establishments.

During each visit the contractor will inspect water systems, measure temperatures at specific locations and may take a number of water samples. Following the visit, a written report will be submitted and the Premises Manager must ensure that recommendations are properly implemented and the reports filed in the manual for future reference.

The contractor's inspection and monitoring service include:

Calorifier blow-down	six-monthly
Tank and calorifier inspection	six-monthly
Calorifier flow and return temperatures check	six-monthly
Test Calorifier for stratification	six-monthly
Servicing, maintenance and fail safe test of (TMV's)	six-monthly
Audit records system manual	six-monthly

4.5. Microbiological Testing

- All high risk properties will be sampled 6 monthly.
- All cold water storage tanks supplying wholesome water for drinking purposes or food preparation shall be sampled 6 monthly for the presence of TVCs, E coli and coliforms.
- Significantly under occupied properties will be sampled monthly unless legionella bacteria are identified. Where legionella bacteria are identified a management plan will be designed and implemented.
- Systems that are deemed to be “**consistently out of control**” by the consultant. Samples will be taken from the sentinel outlets of a hot water system and/or the tank and sentinel outlets of a cold water system. The quantity of samples will be determined by the consultant.

It is a County Council decision to deviate from L8 by not sampling from the base of the calorifier.

Where safe means of access is required to reach tanks, pipework or other equipment Contractors are responsible for providing their own access equipment, however a safe route to and from the access points must be made available by the Premises Manager.

4.6 Managing defects identified by the Consultants

It is the Premises Managers responsibility to address all defects and or management issues identified by either the risk assessment or servicing regime in addition to those identified through site based monitoring. Where the premises manager cannot resolve the defect they need to raise this concern with the relevant manager/property advisor. Any defect categorised as a D1 has an immediate and severe health and safety implication and requires immediate attention.

4.7 Water Temperatures

Water services should be operated at temperatures that prevent the growth of Legionella and reduce the risk of scalding.

Hot Water

Hot water should be stored at more than 60°C and distributed above 50°C. The only exceptions to this are low volume water heaters of 15 litres or less capacity. These may be operated at a minimum of 50°C provided a risk assessment has been carried out by a competent person to confirm that:

- The unit is fed from a wholesome mains water supply
- There is a low risk population
- There is daily usage sufficient to turn over the entire contents of the system.
- No spray outlets are present in the system
- There are no excessive pipe runs

In systems where no hot water is stored e.g. electric showers, combi boilers (where there is no recirculation loop) and instantaneous water heaters, there is no minimum temperature.

Where water heaters and calorifiers are routinely switched off overnight and/or at weekends, this should be controlled automatically by a timer as manual switching (a person physically operating a switch) is not sufficiently reliable. Storage temperatures need to be achieved 1 hour before the building is reoccupied.

Protected Outlets

Serviceable type 3 Thermostatic Mixing Valves (TMV) shall be fitted to all showers where the user cannot adjust the temperature (e.g. push button showers in sports facilities) whether used by vulnerable users or not.

All showers and other hot water outlets which are accessible by vulnerable users in order to prevent scalding must also have a serviceable type 3 TMV fitted.

The Premises Manager shall ensure that adequate measures are in place to prevent access by vulnerable users to all unprotected outlets.

In addition to the above, TMV's must also be fitted to welfare facilities provided in disabled toilets/bathrooms.

All TMV's shall be calibrated by the water hygiene contractor in order to deliver water at 43°C.

Care Settings

Staff must have in place suitable procedures to check the temperature of bath water, using a suitable thermometer, prior to service users entering the water.

Adequate supervision must be provided where vulnerable service users take baths or showers and adequate training must be provided to ensure that staff involved in bathing service users understand the risks and precautions.

Unprotected Outlets

In areas used by people who are not classed as vulnerable with regard to scalding, TMVs should not be fitted, if already in place, they should be removed. Unnecessary installation can limit effective management of Legionella bacteria and may increase the risk of bacteria growth.

Hot water outlets which have been designated as "unprotected" must have a sign alongside to indicate the presence of hot water.

The hot water temperature delivery at these outlets is to be controlled between 50°C and 70°C (with some exceptions e.g. sterilising sinks and heated rinsing sinks).

Cold Water

Cold water must be stored and distributed below 20°C.

4.8 Exposure to Legionella

Legionella is a naturally occurring bacteria which may be present within water systems and are tolerated in small quantities. Where water samples have identified a significant level of Legionella bacteria in a system, this does not constitute a case of Legionnaire's Disease. There are separate procedures, therefore, to address, detected bacteria and a suspected case of Legionnaires Disease.

4.8.1 Action In the Event of Detecting Legionella Bacteria

When a positive count greater than 100 colony-forming units per litre (cfu/l) is identified from the analysis of a water sample taken by the water hygiene consultant, the Entrust Risk Management Team will arrange for appropriate action to be taken in accordance with (Government Guidance) ACOP L8.

This will involve:

- An initial site visit to meet with the Premises Manager by the relevant Property Surveyor and, as appropriate, the relevant Health & Safety Advisor.
- Advice will be given regarding the implications of elevated levels of Legionella bacteria in the water systems.
- All spray nozzles shall be removed from taps in the affected system(s). All shower heads shall be removed. All other high risk outlets shall be removed from use.
- A safe (i.e. ensuring no aerosol is created) flushing regime shall be put in place where any outlet is removed from normal usage. **An increased flushing regime may also be considered appropriate in certain situations.**
- The risk assessment shall be consulted for any outstanding recommendations for the affected system(s).
- A check for any other contributing factors such as a system operating outside its normal parameters should also be undertaken e.g. temperatures etc.
- Chemical clean and disinfection and thermal disinfections may be considered for use as temporary measures or to conclude matters once the engineering measures have been completed but should not be considered as a solution alone.

The Premises Manager in conjunction with the Entrust Risk Management Team and, where necessary, the Health, Safety & Team, will arrange for adequate control measures to be implemented during this period.

The process of cleaning and disinfecting the affected system(s) where necessary will only remove the bacteria. In order to prevent a reoccurrence the system will require modifications to remove the factors that have allowed the bacteria to multiply.

4.8.2 In the Event of a Case or Suspected Case of Legionnaire's Disease

The premises manager must contact the Health and Safety Team if it is suspected or confirmed that an employee/service user has Legionellosis. The Health and Safety Team will liaise with technical experts and notify HSE where appropriate.

The guidance in ACoP L8 Appendix will be followed and action taken to limit the risk of further exposure and cases.

4.9 Water System Checks/Cleaning (Responsible Person)

The following checking, inspection, monitoring and cleaning procedures must be carried out by or under the control of the Premises Manager and recorded in the log book:

Procedure	Frequency	Process
Calorifiers	Annually, or as indicated by the rate of fouling	Inspect calorifier internally by removing the inspection hatch or using a boroscope and clean by draining the vessel. The frequency of inspection and cleaning should be subject to the findings and increased or decreased based on conditions recorded. Where there is no inspection hatch, purge any debris in the base of the calorifier to a suitable drain. Collect the initial flush from the base of hot water heaters to inspect clarity, quantity of debris, and temperature
	Monthly	Check calorifier flow temperatures (thermostat settings should modulate as close to 60 °C as practicable without going below 60 °C) Check calorifier return temperatures (not below 50 °C).
Hot water systems – temperature checks for scalding prevention	Monthly	Check and record temperatures at every tap/showerhead accessible to vulnerable users (these outlets should be protected by TMVs).
	Monthly	If the required temperature of 43°C varies by more than +/- 2°C immediate action should be taken to prevent a scalding incident occurring and the water hygiene consultant must be called out to investigate.
Hot water services for legionella control	Monthly	For non-circulating systems: take temperatures at sentinel points (nearest outlet, furthest outlet and long branches to outlets) to confirm they are at a minimum of 50 °C within one minute.
	Quarterly (ideally on a rolling monthly rota) Rotational basis to ensure the whole system is reaching satisfactory temperatures for legionella control	*For circulating systems: take temperatures at return legs of principal loops (sentinel points) to confirm they are at a minimum of 50 °C. Temperature measurements may be taken on the surface of metallic pipework *For circulating systems: take temperatures at return legs of subordinate loops, temperature measurements can be taken on the surface of pipes, but where this is not practicable, the temperature of water from the last outlet on each loop may be measured and this should be greater than 50 °C within one minute of running. If the temperature rise is slow, it should be confirmed that the outlet is on a long leg and not that the flow and return has failed in that local area. All HWS systems: take temperatures at a representative selection of other points (intermediate outlets of single pipe systems and tertiary loops in circulating systems) to confirm they are at a minimum of 50 °C (55 °C in healthcare premises) to create a temperature profile of the whole system over a defined time period. <i>*Until all risk assessments are reviewed in compliance with ACoP L8 (Fourth Edition) 2013, the location of principal and subordinate loops locations will not be identified in the water Hygiene Risk Assessment.</i>
Point Of Use(POU) water heaters (no greater than 15 litres)	Monthly–six monthly, or as indicated by the risk assessment	Check water temperatures to confirm the heater operates at 50–60 °C or check the installation has a high turnover

Procedure	Frequency	Process
Combination water heaters	Annually	Inspect the integral cold water header tanks as part of the cold water storage tank inspection regime, clean and disinfect as necessary. If evidence shows that the unit regularly overflows hot water into the integral cold water header tank, instigate a temperature monitoring regime to determine the frequency and take precautionary measures as determined by the findings of this monitoring regime.
	Monthly	Check water temperatures at an outlet to confirm the heater operates at 50–60 °C.
Cold water tanks	Annually	<p>Inspect cold water storage tanks and carry out remedial work where necessary.</p> <p>Check the tank water temperature remote from the ball valve and the incoming mains temperature. Record the maximum temperatures of the stored and supply water recorded by fixed maximum/minimum thermometers where fitted.</p> <p>If supply wholesome water for drinking/food preparation please also refer to section 4.5 on Microbiological testing.</p>
Cold water services	Monthly	Check temperatures at sentinel taps (typically those nearest to and furthest from the cold tank, but may also include other key locations on long branches to zones or floor levels). These outlets should be below 20 °C within two minutes of running the cold tap. To identify any local heat gain, which might not be apparent after one minute, observe the thermometer reading during flushing.
	Rotational basis to ensure the whole system is reaching satisfactory temperatures for legionella control Annually	<p>Take temperatures at a representative selection of other points to confirm they are below 20 °C to create a temperature profile of the whole system over a defined time period. Peak temperatures or any temperatures that are slow to fall should be an indicator of a localised problem.</p> <p>Check thermal insulation to ensure it is intact and consider weatherproofing where components are exposed to the outdoor environment.</p>
Showers and spray taps	Quarterly or as indicated by the rate of fouling or other risk factors, e.g. areas with high risk patients	Dismantle, descale and disinfect all showerheads and hoses using suitable materials. Use a de-scale agent such as Freescan, Cleanforce or similar approved product to remove lime scale by soaking the showerhead / hose for 30 minutes or until the lime scale has been removed. Rinse the showerhead / hose and then clean and sanitise them using Titan Sanitizer, Protect or similar as approved by the Health, Safety and Wellbeing Service. A COSHH risk assessment must be in place for the use of descaling and cleaning products.
Point of Use (POU) Filters	According to manufacturer's guidelines	Record the service start date and lifespan or end date and replace filters as recommended by the manufacturer (0.2 µm membrane POU filters should be used primarily as a temporary control measure while a permanent safe engineering solution is developed, although long-term use of such filters may be needed in some healthcare situations).
Base exchange softeners	Weekly, but depends on the size of the vessel and the rate of	Visually check the salt levels and top up salt, if required. Undertake a hardness check to confirm operation of the softener.

Procedure	Frequency	Process
	salt consumption Annually, or according to manufacturer's guidelines	Service and disinfect.
Multiple use filters	According to manufacturer's guidelines	Backwash and regenerate as specified by the manufacturer
Infrequently used outlets	Weekly, or as indicated by the risk assessment	Consideration should be given to removing infrequently used showers, taps and any associated equipment that uses water. If removed, any redundant supply pipework should be cut back as far as possible to a common supply (e.g. to the recirculating pipework or the pipework supplying a more frequently used upstream fitting) but preferably by removing the feeding 'T' Infrequently used equipment within a water system (i.e. not used for a period equal to or greater than seven days) should be included on the flushing regime. Flush the outlets until the temperature at the outlet stabilises and is comparable to supply water and purge to drain Regularly use the outlets to minimise the risk from microbial growth in the peripheral parts of the water system, sustain and log this procedure once started For high risk populations, e.g. healthcare and care homes, more frequent flushing may be required as indicated by the risk assessment.
TMVs	Annually or on a frequency defined by the risk assessment,	Risk assess whether the TMV fitting is required, and if not, remove Where needed, inspect, clean, descale and disinfect any strainers or filters associated with TMVs. To maintain protection against scald risk, TMVs require regular routine maintenance carried out by competent persons in accordance with the manufacturer's instructions.
Expansion vessels	Monthly–six monthly, as indicated by the risk assessment	Where practical, flush through and purge to drain. Bladders should be changed according to the manufacturer's guidelines or as indicated by the risk assessment.
Thermometer accuracy	During a service visit by the water hygiene consultant	A comparative check should be made in still (not running) water using the immersion probe against the consultant's thermometer to ensure the accuracy of the thermometer. Checks should be made in both hot and cold water to ensure accuracy across the range of likely readings. Where a thermometer is found to have an error it should be recalibrated, repaired or replaced immediately.
Humidifier cleaning	Periods as recommended by the manufacturer	Any humidifiers that incorporate, or take water from reservoirs or tanks that can store water at temperatures in excess of 20°C should be regularly cleaned and maintained in accordance with the manufacturer's instructions. Only materials that have been subject to an adequate COSHH risk assessment must be used to clean humidifiers.
Air conditioning equipment	6 monthly	Staffordshire County Council does not currently operate any cooling towers (evaporative condensing systems). Therefore all air conditioning equipment shall be serviced in accordance with the manufacturer's instructions every 6 months by the contractor appointed by the Council to minimise any foreseeable risks arising from the normal operation of the equipment. This shall include cleaning and disinfecting the collection trays below condensing coils where water is likely to collect.

Procedure	Frequency	Process
Swimming pool plant	Periods recommended by the manufacturer	<p>These can be separated into conventional swimming pools and spa pools/baths.</p> <p>Conventional swimming pools maintained in accordance with the manufacturer's instructions and ACOP present very little risk of exposure to Legionnaires disease despite the temperatures involved due to the continual chemical treatment that takes place.</p> <p>Spa pools/baths, hydrotherapy pools or whirlpool baths (Jacuzzi is a trade name of such type of pool) present a greater risk due to the agitation of the water contained within the pool by means of pumped water or induced air that may create an aerosol. For this reason it is crucial that the manufacturer's instructions are followed closely and regular monitoring of water quality and chemical treatment takes place. All cleaning procedures must be carried out to exacting standards at the required frequencies by a competent person.</p>
Ancillary equipment (e.g: water fountains, water dispensers, mains fed vending machines etc.).	As required	<p>Any other equipment that utilises water should be maintained in a clean and safe condition in accordance with manufacturer's instructions. Where any item is infrequently used or is not used for long periods of time, consideration should be given to the possibility of stagnation occurring in the water contained within the appliance or the pipework supplying it (e.g. pipework should be regularly flushed or disconnected and drained down).</p> <p>Bottled water dispensers and ice machines- risk assessment must be completed especially where used by vulnerable groups and they must be cleaned, serviced and maintained in accordance with manufacturer's instructions.</p>
Sprinklers	As determined by the system installed	Conditions normally found within firefighting systems are not thought able to support the growth of populations of <i>legionella</i> . <i>It is recommended that upon installation the manufacturer's guidance relating to this is reviewed and considered.</i>
Dosing Systems	As determined by the system installed	An inspection and maintenance schedule will be set up in line with manufacturers recommendations for the system installed

4.10 Commissioning and Decommissioning

4.10.1 Commissioning (New and Newly Acquired Buildings)

A risk assessment should be performed before commissioning, to identify and take into account the potential for stagnation as this may lead to microbial growth where the buildings are not fully occupied immediately or where systems are commissioned as occupation occurs.

The building commissioning process should take into account the size and complexity of the water system. A correctly designed and installed water system should provide wholesome water at every outlet. Where there are any problems the design or installation defect should be identified and rectified. Any new water system will require, as a minimum, cleaned and flushed before being brought into use. Larger more complex systems may also require disinfection.

4.10.2 Decommissioning

If a property is to be taken out of use, it is recommended that the water systems are drained down fully, ensuring that all calorifiers and water heaters are taken off-line.

4.10.3 Buildings Taken Temporarily Out of Use

Short Periods (Less Than Two weeks)

Flush all cold outlets for a minimum of two minutes and hot outlets for 30 seconds to ensure that fresh water is drawn into the system.

This must be completed as near to but at least two hours before reoccupation to ensure the hot water temperatures are reinstated and microbial growth is prevented.

Medium Term (Two weeks to Two Months)

Flush all outlets for a suitable period of time to ensure that the entire system is turned over and replenished with fresh water.

This must be completed as near to but at least two hours before reoccupation to ensure the hot water temperatures are reinstated and microbial growth is prevented.

Alternatively, regularly flush in accordance with the little used outlets procedure described in the table above, systems may be returned to normal use with no further measures to be taken.

Long Term (Greater Than Two Months)

If a building is to be retained but closed indefinitely, the system should be isolated to prevent accidental flooding but not be drained down as this may permit increased microbial growth. To return the system to use, the system should be recommissioned as though it were new i.e. thoroughly flushed, cleaned and disinfected before being returned to use. (See Commissioning).

If a system requires cleaning and/or disinfecting prior to being used, this process should be carried out by a competent person as the levels of disinfectant must be carefully controlled. Airlocks may occur within gravity fed systems that will require removal if they have been drained down and refilled.

4.11 Building Design

When developing new extensions and new build projects the council will ensure that consideration for designing out stored water systems is applied wherever practicable and will ensure that adequate precautions are in place to comply with this policy, the legislative framework and in particular the Approved Code of Practice L8 and the Water Regulations.

4.12 Managing Works to Premises

Where County Council or Entrust Staff with responsibility for arranging work to premises (whether the work being completed is carried out by contractors, Council staff or others) must ensure, as far as is reasonably practicable, that:

- If the work of any person involves working on the water/water heating system, they are familiar with this (Water System Safety) policy, the water regulations and ACOP L8 before work commences.
- No work will be undertaken until the Control of Contractors Hazard Exchange Form has been completed by the “Responsible Person” and person(s) undertaking the work. Work may only commence when measures to deal with any identified hazards have been agreed.
- The contractor/third parties must read and sign the Water Hygiene log book and record the details of any work carried out.
- If the activities of any person involves invasive work on the water/water heating system (e.g. cutting into pipes, disconnection of services, etc.), ensure that person completes a suitable cleaning and disinfection of the system prior to its return to use and provides a clearance certificate.
- All works must comply with this (Water System Safety) policy, the water regulations and ACOP L8.
- Where a “Responsible Person” has responsibility for a listed building or a building in a conservation area he/she must ensure that no work is undertaken that contravenes the Listed Buildings and Conservation Areas Act 1990.

5. Training and Competency

Premises Managers and employees completing water hygiene checks must attend the Water System Safety Course. Premises Managers should also have received Premises Manager Training.

6. Legislative Framework

- a. The Control of Substances Hazardous to Health (COSHH) Regulations
- b. The Water Supply (Water Fittings) Regulations 1999. S.I. 1999 No.1148
- c. BS EN806 Installations inside buildings conveying water for human consumption. Operation and maintenance.
- d. BS 8580:2010 Water quality. Risk Assessments for Legionella control.
- e. Approved Code of Practice (ACOP) L8 - 'Legionnaires Disease: The Control of Legionella Bacteria in Water Systems'

7. Thermometer Type

A digital thermometer is required to meet the legal requirements for temperature monitoring.

The thermometer is required to have interchangeable probes, one suitable to be immersed in liquid for taking outlet temperatures and another to measure surface temperatures of copper pipes. The thermometer should be accurate and have a regular refresh rate of at least once per second.

An example of a suitable thermometer would be RS1319A Digital Thermometer, 1 input recording, K Type Input with an immersion probe and surface probe see link below. Many other suitable alternatives are available.

<http://uk.rs-online.com/web/p/digital-thermometers/0103433/>

8. Specialist Advice

It is recommended that you contact the Health, Safety & Wellbeing Service if further advice, guidance and support are required.

The Entrust Property Surveyors provide advice on water hygiene to all work places and schools who purchase their services. Entrust Risk Management Service also offers service to complete monitoring activities required to comply with these arrangements.

The County Council operates a Water Management Forum consisting of key members of the Health, Safety & Wellbeing Service, Strategic Property, Entrust Property Team, Water Hygiene Consultants.

The group meets biannually to monitor the effectiveness of the management arrangements, monitoring regimes and agree targeted solutions.

9. Supporting Information

Control of Contractors Management Arrangement

Control of Substances Hazardous to Health Management Arrangements

10. Standard Documents

Water Hygiene Risk Assessment & Record System Manual (log book)

Control of Contractors Hazard Exchange Form HSF46

Adopted on: September 2017

Review by: September 2018