

Legionella Risk Assessment of Hot & Cold Water Systems



RA4984

**Leeds Yorkshire Housing Association
Estate Office Harrison and Potter Trust Homes
Lovell Park Road
Leeds
LS2 8DA**

9th January 2019

Recommended review date 8th January 2021

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Section 1

INTRODUCTION

Legionella risk assessment

The legionella risk assessment is undertaken to enable dutyholders, which includes employers and those responsible for the control of the premises eg landlords to comply with the guidance in the **HSE document, “Legionnaires’ disease: The control of legionella bacteria in water systems – Approved Code of Practice and guidance on regulations (ACOP L8) (Fourth edition 2013)”** and **BS 8580:2010: “Water quality - Risk assessments for Legionella control – Code of practice”**. Survey information of the water system condition and other factors applicable to the requirements of the ACOP L8 has been recorded and recommendations are made in the report with reference to the relevant sections in the ACOP L8 document.

Implementation of recommendations as identified in the survey places a responsibility on dutyholders which includes employers and persons responsible for health and safety on the premises to prepare a scheme for preventing or controlling the risk from legionella bacteria. These requirements can be achieved by adopting a scheme of monitoring in conjunction with a regime of preventive maintenance. Records of all activities relating to the control regime must be kept.

Purpose of the risk assessment

The purpose of the risk assessment is to identify the possible risks and enable a decision on:

- a) the risk to health, i.e. whether the potential for harm to health from exposure is reasonable foreseeable, unless adequate precautionary measures are taken:
- b) The necessary measures to prevent, or adequately control, the risk from exposure to legionella bacteria.

Legionella and conditions conducive to bacterial proliferation

Legionnaires disease is the most well-known and serious form of diseases known as Legionellosis. Legionnaires disease is a potentially fatal form of pneumonia (infection of the lower respiratory tract) caused by the legionella bacteria. Legionnaire's disease is normally contracted by inhaling water aerosol/droplets contaminated with legionella bacteria. Legionella pneumophila is one species and is commonly associated with disease outbreaks. Legionella pneumophila can also cause short feverish illness without pneumonia known as Pontiac Fever and Lochgoilhead Fever.

Legionella bacteria are common and can be found in environmental water sources. Legionella bacteria in water provided with an ideal temperature range 20°C – 45°C and nutrients are most likely to proliferate. Legionella will survive at temperatures below 20°C but is considered to be in a dormant state with no growth activity. The bacterium does not survive temperatures maintained consistently at 60°C or above.

Research and investigations indicate that the occurrence of legionella contamination is greatest in manufactured water systems such as water cooling towers, evaporative condensers, hot and cold water services, water spray humidifiers, air washers, spa baths and pools etc. Sediment, scale and organic materials present in water systems, can provide nutrients and give protection for legionella.

Legionella have been shown to colonise certain types of water fittings, pipe work and materials used in the construction of water systems. The presence of these materials may provide nutrients for legionella and make eradication difficult. Other organisms in water systems such as bacteria, amoeba and algae can provide a suitable nutrient and habitat in which legionella can survive and multiply.

The formation of biofilms within a water system is undesirable and may provide a protective harbour and favourable conditions for legionella proliferation. Incorporation of legionella in biofilms and in enclosures within protozoa can protect the organisms freely suspended in water.

Assessment of risk

Legionnaire's disease is most commonly caused by the inhalation of water droplets/aerosol contaminated with the legionella bacteria. It is therefore important that systems susceptible to colonisation by legionellae and which incorporate a potential means for creating and disseminating water droplets/aerosol should be identified and the risk they present should be assessed. This identification and assessment is required under ACOP L8.

The assessment must be completed for routine system operation and use and also for circumstances such as breakdown, abnormal operation, commissioning or other unusual circumstances.

Once the assessment has been completed a monitoring regime can be implemented to prevent or control the risk. The monitoring regime will be based on a sound knowledge of the varying levels of attention required by the differing risk sources within the building.

The assessment takes account of:

1. The potential for formation of water droplets/aerosol.
2. The condition of the water.
3. The water temperature.
4. The water turnover rate.
5. The susceptibility of persons exposed to droplets.
6. The population density exposed to droplets.

You need to review the assessment regularly and specifically when there is reason to believe that the original risk assessment may no longer be valid e.g. changes made to plant or water systems or its use:-

- Changes made to building use in which the water system is installed.
- New information about risks or control measures becomes available.
- Results of checks indicate that control measures are no longer effective.

You should also review management and communication procedures as appropriate.

Once a risk has been identified and assessed, a scheme should be prepared for preventing or controlling it. The risk is heightened when conditions are not monitored and controlled and legionella is allowed to proliferate.

The scheme should be implemented together with planned preventative maintenance in line with that contained within the general recommendations of this report. This will meet the requirements of ACOP L8 and "prepare a scheme for preventing or controlling the risk".

Section 2

EXECUTIVE SUMMARY

At the request of Leeds Yorkshire Housing Association a Water Hygiene & Legionella Risk Assessment was carried out at Estate Office Harrison and Potter Trust Homes Lovell Park Road Leeds LS2 8DA.

- The purpose of this report is to address both Leeds Yorkshire Housing Association and their appointed representative's duty to ensure that water services at the aforementioned site comply fully with current legislation and do not present a health risk to persons on site.

General Site Description

A complex of retirement housing comprising of 32 1 bedroom terraced properties with resident management staff and careline alarm services. There is a common room on site which is 3 storey detached building with basement storage area and loft, a laundry room on ground level between the common room and wardens office.

- There are 1 permanent members of staff on this site at any one time.
- The site has various visitors throughout the day.
- There are various residents across the 32 properties.

This is a **high risk** property used by a **medium risk** population, which has been taken into account in the detailed plant and system assessments.

For a more detailed summary of the system description please see Section 6.

There is currently no legionella control scheme in place to monitor water systems. I recommend a control scheme is implemented immediately by either a contractor or in-house.

Is there a Log Book on site?	N/A
Is it up to date?	N/A
Who does the Monitoring of the site?	N/A
Is the responsible person trained?	N/A
Previous Risk Assessment made available?	N.A

For ease of reference each water system has been risk assessed and given a score (numerical risk N°). This is summarised in the risk summary table below:

Risk summary table:

Area	Numerical Risk N°.	Risk Assessed
Mains Water	100	Low Risk
Stored Hot Water (WH1)	N/A	Medium Risk
Instantaneous Hot Water (IWH1)	N/A	Low Risk
Stored Hot Water (HWC 01)	100	Low Risk
All Dead Ends		
DATE OF ASSESSMENT:		9th January 2019

A full list of the required remedial works required is given in Section 14.

Document Review

This legionella risk assessment has been reviewed by Keith Baldwin QUENSH manager

Signature:



Section 3

AIM

The aim of the survey, and this report, is to outline and to place on record, a descriptive plan of the extent, condition and design of the Domestic Water Systems (DWS) upon this site, and to assess the risk of bacterial contamination posed by these systems, particularly the Legionella species. Unless specified, this will not include the air conditioning and central heating systems.

Whilst compiling this report we have taken into account some of the local Water Supply Regulations 1999 where we believe that non-compliance of these sections could constitute a Water Hygiene Risk.

Basic site schematics are provided in section 15 of this report. Schematic diagrams are accurate but simplified illustrations of the configuration of water systems, which include all key components and relevant components and omit everything which is not relevant. They are based upon available and possibly incomplete information gathered at the time of the assessment. They are not formal technical drawings and are intended to be easy to read without specialized training or experience. Like maps of underground railways in many cities, they allow the layperson unfamiliar with the layout of a system to understand quickly the relative positions and connections of the relevant components, whilst providing only an indication of the scale.

Section 4

DUTYHOLDER and RESPONSIBLE PERSON

Client obligations as defined in the Approved Code of Practice (ACOP L8 4th Edition 2013)

(i) Introduction:

The Approved Code of Practice and guidance on regulations (ACOP L8) (Fourth edition 2013) "The control of legionella bacteria in water systems" is written for dutyholders to help them comply with their legal duties. ACOP L8 gives advice on the requirements of the Health and Safety at Work etc. Act 1974 (HSWA) and the Control of Substances Hazardous to Health Regulations 2002 (COSHH) concerning the risk from exposure to legionella bacteria. In particular it gives guidance on sections 2, 3, 4 and 6 (as amended by the Consumer Protection Act 1987) of HSWA and regulations 6, 7, 8, 9 and 12 of COSHH. The Code also gives guidance on compliance with the relevant parts of the Management of Health and Safety at Work Regulations 1999 (MHSWR).

(ii) Definitions of Dutyholder & Responsible Persons

Dutyholder

The dutyholder is either:

- (a) the employer, where the risk from their undertaking is to their employees or others; or
- (b) a self-employed person, where there is a risk from their undertaking to themselves or others; or
- (c) the person who is in control of premises or systems in connection with work, where there is a risk from systems in the building, eg where a building is let to tenants, but the landlord keeps responsibility for its maintenance.

Responsible person

The dutyholder should specifically appoint a competent person or persons to take day-to-day responsibility for controlling any identified risk from legionella bacteria, known as the ‘responsible person’. It is important for the appointed responsible person to have *sufficient authority, competence and knowledge of the installation* to ensure that all operational procedures are carried out effectively and in a timely way. Those specifically appointed to implement the control measures and strategies should be suitably informed, instructed and trained and their suitability assessed. They must be properly trained to a level that ensures tasks are carried out in a safe, technically competent manner; and receive regular refresher training. Keep records of all initial and refresher training. If a dutyholder is self- employed or a member of a partnership, and is competent, they may appoint themselves. The appointed responsible person should have a clear understanding of their role and the overall health and safety management structure and policy in the organization (para. 51 ACOP L8).

Responsible Person	Details
Dutyholder	TBC
Responsible Person	TBC
Deputy Responsible Person	TBC

Section 5

WATER HYGIENE SERVICES LTD

METHODOLOGY OF RISK ASSESSMENT

The method of risk assessment takes account of the principle parameters which govern the risk associated with each water source in the building. Selective and planned water sampling may also be carried out in order to confirm absence of Legionella. The following assessment parameters and associated risk factors have been developed in order to derive a numerical risk value and overall risk rating.

The following risk rating can be used on any water system in building.

Risk Parameter	Risk Rating	Numerical Value
Formation of Droplets		
Still Water	Low	10
Droplets	Medium	20
Aerosol	High	30
Water Condition		
Clean	Low	10
Contaminated	Medium	20
Heavily Contaminated	High	30
Water Temperature		
Below 20°C	Low	10
21°C - 25°C	Medium	20
26°C - 45°C	High	30
46°C - 59°C	Medium	20
Above 60°C	Low	10
Water Turnover		
High Turnover	Low	10
Moderate Turnover	Medium	20
Low Turnover	High	30
Susceptibility of Exposed Persons		
Low Population	Low	10
Average Population	Medium	20
Susceptible Population	High	30
Population Density of Building		
Low Density	Low	10
Medium Density	Medium	20
High Density	High	30

Legionella Positive Rating Factor

If a sample is found Legionella positive an additional weighting factor shall be applied to the assessment. The total numerical value for the infected source shall be multiplied by 2.

NOTE: If the Cold Water Storage Tank (CWST) has heavy corrosion and requires relining and/or the tank has been contaminated by any foreign object it must be classed as high risk and remedial action should be immediate.

Source Risk Rating

Calculated by addition of numerical values for each of the risk parameters of each source and a weighting factor if applicable.

Total Numerical Value	Overall Risk Rating
60 - 100	Low
100+ - 140	Medium
140+	High

The overall risk rating for each source must be evaluated in conjunction with other influences observed during the course of the survey and with consideration for the factors highlighted in the Approved Code of Practice (L8), i.e. system breakdowns, abnormal operations, commissioning and other unusual circumstances.

Section 6

SYSTEM DESCRIPTION

The mains water into the building is supplied by Yorkshire Water and we can therefore assume it is of a wholesome quality.

The following water systems were inspected:

System No.	System Description	Description of plant and services inspected
1.1	Common Room : Mains Cold Water	The mains water enters the building via the small back room and feeds all the outlets as listed in the asset register.
1.2	Laundry Room : Mains Cold Water	The mains water enters the building beneath the sink and feeds all the outlets as listed in the asset register.
1.3	Wardens Office : Mains Cold Water	The mains water enters the building beneath the sink and feeds all the outlets as listed in the asset register.
2	Stored Hot Water	WH 1 is located beneath the sink the small back room leading to the toilet.feeds all the outlets as listed in the asset register.
3	Stored Hot Water	IWH 1 (Instantaneous Water Heater 1) is located over the basin in the toilet and feeds the toilet basin only.
4	Stored Hot Water	HWC 1 (Hot Water Cylinder 1) is located in the Laundry Room and feeds all the outlets as listed in the asset register.

Section 7

ASSESSMENT OF SYSTEMS

7.1 System 1: Mains Water

MAINS WATER DATA – Common Room, Laundry and Wardens Office					
System Number	1				
Location of main stop valve	Unknown				
Accessibility of stop valve	Unknown				
Materials of construction	Unknown				
Are distribution pipes insulated?	Unknown				
Drain valve fitted at lowest point	Unknown				
Water Softener attached?	Unknown				
Any Biocide attached?	Unknown				
RISK ASSESSMENT					
Parameters	Potential Risk				
	Low 10 points ✓		Med. 20 points ✓		High 30 points ✓
Formation of droplets	Still water		Droplets	✓	Aerosol
Water condition	Clean	✓	Contaminated		Heavily contaminated
Water temperature	Below 20°C	✓	21°C – 25°C		26°C – 45°C
Water turnover	High turnover		Mod. turnover		Low turnover
Susceptibility of exposed persons	Low		Average	✓	Susceptible pop.
Population density	Low density	✓	Medium density		High density
Score 60 – 100 = Low Score 100+ – 140 = Medium Score 140+ = High					100 – Low Risk
REMEDIAL REQUIREMENTS ✓					
No remedial works identified.					

Section 7 (Continued)

7.4 System 4: Stored Hot Water

HOT WATER CYLINDER (HWC) - DATA						
System number	4					
Hot Water Cylinder reference	HWC 01					
Hot Water Cylinder location	Laundry Room					
Manufacturer and type	Copper form Ultra Steel					
Is the unit Linked?	N/A					
Unit dimensions – dia. x height (Capacity?)	210Litres					
Type of insulation & condition	Pre Insulated					
Is there an access hatch?	No					
Vented or unvented?	Unvented					
Is expansion vessel attached? Flush valve? Fitted correctly?	Yes	No	No	No		
Is unit & pipework clearly labelled?	No					
Drain valve location and size?	Inlet pipe 15mm					
Is return/flow pump fitted?	No					
Is a temperature gauge fitted?	No					
Is there evidence of stratification?	No					
Top temperature?	N/A HWC turned off					
Return temperature?	N/A HWC turned off					
Is there adequate lighting, access & space?	Yes Yes Yes					
RISK ASSESSMENT ✓						
Parameters	Potential Risk					
	Low 10 points ✓		Med 20 points ✓		High 30 points ✓	
Formation of droplets	Still water		Droplets	✓	Aerosol	
Water condition	Clean	✓	Contaminated		Heavily contaminated	
Water temperature	Above 60°C		46°C – 59°C		26°C – 45°C	
Water turnover	High turnover		Mod. turnover		Low turnover	✓
Susceptibility of exposed persons	Low		Average	✓	Susceptible pop.	
Population density	Low density		Medium density	✓	High density	
Score 60 – 100 = Low Score 100+ – 140 = Medium Score 140+ = High					100 Low Risk	
REMEDIAL REQUIREMENTS ✓						
Fit flush valve in leg of expansion vessel to allow flushing quarterly.					✓	
						

Section 7 (Continued)

Stored/ Instantaneous Hot Water

INSTANTANEOUS (IWH), STORAGE WATER HEATER (WH) and Combination Boiler (COMBI) Data						
WH Ref.	System No.	Location	Make, Model & Capacity	Temp	Notes:- Replace, switch on, flush weekly, dead-leg, increase temperature	Risk
WH 1	2	Common Room small back room cupboard beneath sink.	Santon OUVU Point of Use Unvented Electric Storage Heater	N/A	Turned off. The residents only turn it on when the building is to be used.	Medium
IWH1	3	Toilet on wall above basin.	Santon POU Heater	30°C		Low
WH1						
				IWH		
						

Section 8

SHOWERS

Showers with fixed heads are preferred for prevention of backflow. Where flexible hoses and moveable shower outlets are provided, the outlet must not be capable of being accidentally immersed into a drain, WC or other potential source of contamination. Some shower heads are provided with a means for adjusting the flow, for example fine spray, pulsating flow etc, selected by utilising different sets of nozzles. As this will exacerbate possible stagnation problems, they should not be installed in healthcare premises. Taps and showers should be flushed at least weekly, or the retained water flushed to waste immediately before use without the generation of aerosols.

During the Risk Assessment no Showers were found, therefore the risk is N/A.

Section 8 (Continued)

SPRAY TAPS

Spray Taps

Spray taps, including water heater spray nozzle outlets, are a potential source of contamination and infection. These outlets should be dismantled, descaled and cleaned on a quarterly basis (minimum) in conjunction with the shower disinfection regime.

During the Risk Assessment no Spray Taps were found, therefore the risk is N/A.

Section 9

RPZ VALVES

Reduced Pressure Zone (RPZ) Valves

A Reduced Pressure Zone (RPZ) Valve is a verifiable Type BA backflow preventer. This type of valve protects the wholesome nature of the supply (mains water) from contamination by hazardous materials (except Cat 5 fluids like human waste etc.) These devices are often required by the local water authority and the need will be raised during a site survey. RPZ valves must be commissioned and maintained by an approved contractor. It is a requirement that they are serviced at least annually and the results kept on record.

During the Risk Assessment no RPZ Valves were identified.

Section 10

DEAD ENDS/ LITTLE USED OUTLETS

Dead Ends

The absence of water circulation means that any microbiological population can be left undisturbed for long periods, allowing for growth and multiplication. Any subsequent disruption of the dead end can lead to rapid colonisation of the water system.

DEADENDS/LEGS									
DE	Location	Length (m)	Diameter (mm)	Service Branch Diameter	Service Valve Present	Can it be Flushed	Copper, steel, plastic or lead	Action	Risk
DE1	Common Room Small Back Room	10m x 2	15mm	15mm	No	No	Copper	Cut back to service branch Or install a flushing device and flush weekly	High
DE2	Common Room Small Back Room	10m x 1	15mm	15mm	No	No	Copper	Cut back to service branch Or install a flushing device and flush weekly	High
DE1						DE2			
									

Section 10 (Continued)

Little Used Outlets

In any case where little used outlets are identified during the Risk Assessment Survey, please be advised that that this can change throughout the course of the year, particularly in Schools and College's (where there are high and low peaks of attendance).

Section 11

OTHER RISKS

Thermostatic Mixing Valves

Thermostatic Mixing Valves (TMV's) should comply with the standards of the MES D08 – "Thermostatic Mixing Valves (Healthcare Premises)". Thermostatic valves should be tested (failsafe) every six months and serviced every twelve months. TMV's should be no greater than two metres away from the draw off point. All TMV's and TMT's (Thermostatic Mixing Taps) are listed in the asset register of this document.

Strainers

Strainers should be fitted within the water pipework system to protect expansion vessels, mechanical backflow protection devices and thermostatic valves against ingress of particulate matter. The installation of these fittings should allow adequate access for maintenance/replacement and they should be provided with a means of upstream (and downstream where appropriate) isolation. Strainers can be a source of Legionella bacteria and should be included in routine cleaning, maintenance and disinfection procedures. All strainers will be highlighted in the asset register of this document.

Expansion Vessels

These vessels are typically vertical in orientation and normally have a diaphragm to separate the water from the gas space above. They introduce a potential problem of colonisation by Legionella, as the Plant Room space temperature will exceed that of the incoming water. It is important that the expansion vessel is located on the cold feed rather than on the hot water side of the system. All materials in contact with water should be WRAS approved. Expansion vessels in systems operating at a steady temperature and pressure may have long periods without exchanging any significant amount of water and therefore can be at risk of aiding microbial growth. To minimise the risk of microbial growth, expansion vessels should be installed as follows:

- In cool areas on cold flowing pipes
- Mounted as close to the incoming water supply as possible
- Mounted vertically on pipework to minimise any trapping of debris
- With an isolation and drain valve to aid flushing and sampling
- To minimise the volume retained within them
- Designed to stimulate flow within the vessel

Flexible Hoses

Flexible hoses used in potable water supply systems should be identified and risk assessed for the possibility of contamination with harmful micro-organisms. An action plan should be developed by each Board which gives priority to areas of highest risk (i.e. those with persons vulnerable to infection). Depending on the risk assessment, the action plan should address the replacement of flexible hoses with hard or soft bendable metal or plastic pipes. Where flexible hoses must be used (e.g. on essential equipment such as hi-low baths) these must be lined with a suitable alternative to EPDM, as well as being WRAS approved. If it cannot be verified that the hose is WRAS approved a recommendation will be made to remove the flexible hose and replace it with a WRAS approved alternative. All flexible hoses identified will be listed in the asset register of this document.

Section 12

ASSET REGISTER

The survey has been carried out only on the parts of the building which have been made accessible to the surveyor. In some areas, assumptions as to what feeds particular outlets have had to be made as we were not able to shut down tanks or other items, in order to confirm what is actually feeding these outlets. Any Water Services found in any part of the building where access was not made available are not included in this report, although the exclusion of these systems does not indicate absence.

The identification of sentinels in this risk assessment will be for guidance purposes only unless informed otherwise.

System summary:

System No	System Description E.g. mains, hot water system, etc.	System No	System Description	System No	System Description
1	Mains Water	2	Stored Hot Water (WH1)	3	Stored Hot Water (IWH1)
4	Stored Hot Water (HWC1)				

Location	Asset Type	No.	Asset No.	Sys ID No.	Sentinel	TMV/TMT	Flexi hose?	Strainers?	Scale?	Sensor tap	Spray tap	Little Used Outlets	Mixed Temp.	Cold Temp.	Hot Temp.	Comments/ Remedials	Risk
Function Room	S	1	001	1,2										9	9	Heater turned off	
Small Back Room	S	1	002	1										9			
Toilet	B	1	003	1,3										9	31	POU Heater on wall providing hot water.	
	T	1	004	1													

Location	Asset Type	No.	Asset No.	Sys ID No.	Sentinel	TMV/TMT	Flexi hose?	Strainers?	Scale?	Sensor tap	Spray tap	Little Used Outlets	Mixed Temp.	Cold Temp.	Hot Temp.	Comments/ Remedials	Risk
Laundry Room Ground Floor of the complex	S	1	005	1,4										9	9		
	S	1	006	1,4										9	9		
	WM	1	007	1,4													
	WM	1	008	1,4													
Wardens Office on the Ground Floor of the complex	S	1	009	1,2										10	10		
Toilet	B	1	010	1,4													
	T	1	011	1													

Key:

B = Basin BA = Bath Bib = Bib Tap (Hose union) BS = Belfast Sink B/SH = Backwash Shower Head CU = Chemical Unit DW = Dishwasher
 DF = Drinking Fountain DUWL = Dental Unit Water Line IWH = Instantaneous Water Heater LS = Lab Sink OT = Outside Tap ODU = Outside Drinking Unit
 POU = Point of Use Heater PR = Potato Rumbler SH = Shower S = Sink SL = Sluice SO = Steam Oven SP = Spray Tap TMV = Thermal Mixing Valve T = Toilet
 U = Urinal VEN = Vending Machine WB = Water Boiler WD = Waste Disposal WH = Water Heater WCo = Water Cooler WM = Washing Machine

Section 13

CONTROL SCHEME

A site specific control scheme should be implemented in order to record, as a minimum, the information listed in the generic tables below. A site specific Log Book populated with the exact locations for the following regime should be generated and implemented.

Domestic Water Services			
Area	Action	Frequency	By
Calorifiers	Inspect Calorifier internally	Minimum Annually	The responsible person or a nominated subcontractor
	Purge calorifier at drain valve until water runs clear, noting the condition of the water.	Minimum Annually	The responsible person or a nominated subcontractor
	Check calorifier flow temperatures (should be minimum 60°C) Check calorifier return temperatures (should be minimum 50°C, 55°C in healthcare premises)	Monthly	The responsible person or a nominated subcontractor
Hot Water Services	Non – Circulating systems: take temperatures from sentinel points. (should be minimum 50°C, 55°C in healthcare premises within one minute)	Monthly	The responsible person or a nominated subcontractor
	Circulating systems: take temperatures from return legs of principal and subordinate loops. (should be minimum 50°C, 55°C in healthcare premises within one minute)	Monthly	The responsible person or a nominated subcontractor
	All HWS systems: check temperatures at a representative selection of other outlets. (should be minimum 50°C, 55°C in healthcare premises within one minute)	Monthly	The responsible person or a nominated subcontractor
POU Water Heaters(15 Litres max)	Check water temperatures(should be 50 – 60°C, 55°C in healthcare premises within one minute)	Monthly – Six monthly	The responsible person or a nominated subcontractor
Combination Water Heater	Inspect integral cold water header tanks	Annually	The responsible person or a nominated subcontractor
	Check water at an outlet(Should operate at 55-60°C)	Monthly	The responsible person or a nominated subcontractor

Cold Water Tanks	Inspect cold water tanks	Annually	The responsible person or a nominated subcontractor
	Check water temperatures remote from the ball valve and incoming mains	Annually(Summer)	The responsible person or a nominated subcontractor
Cold Water Services	Check temperatures at sentinel taps	Monthly	The responsible person or a nominated subcontractor
	Check temperatures at a representative selection of other points(Should be below 20°C)	Monthly	The responsible person or a nominated subcontractor
	Check thermal insulation to ensure weather proofed where exposed to outdoor environment	Annually	The responsible person or a nominated subcontractor
Showers and Spray taps	Dismantle, clean and descale removable parts, heads, inserts and hoses where fitted	Minimum Quarterly	The responsible person or a nominated subcontractor
POU Filters	Record the service start date and lifespan, or end date and replace filters as recommended by manufacturer	According to manufacturer's guidelines	The responsible person or a nominated subcontractor
Base Exchange softeners	Visually check salt levels and carry out hardness check	Weekly(dependent on size of vessel and rate of salt consumption)	The responsible person or a nominated subcontractor
	Service and disinfect	Annually or according to manufacturer's guidelines	The responsible person or a nominated subcontractor
Multiple use filters	Backwash and regenerate as specified by manufacturer	According to manufacturer's guidelines	The responsible person or a nominated subcontractor
Infrequently used outlets	Flush little used outlets until the water temperature stabilises and is comparable to the supply water	Minimum Weekly	The responsible person or a nominated subcontractor
Thermostatic mixing valve(TMV's)	Carry out regular routine maintenance of TMV's. Inspect, clean, descale and disinfect strainers or filters.	Minimum Annually	The responsible person or a nominated subcontractor
Expansion Vessels	Where practical, flush through and purge to drain	Monthly to six monthly	The responsible person or a nominated subcontractor

Note:

Frequency may need to be increased if outlets are seen to become heavily scaled between cleaning actions.

* It may not be feasible in all cases to internally drain and inspect calorifier vessels annually. Where this is not practicable for reasons of service demands, the age of vessels or other factors then an alternative control strategy is to be undertaken to flush and inspect water from the base of the vessel with a view to its condition in respect to scale, sludge, temperature and discoloration to determine the requirement for further action such as descaling or cleaning.

Section 14

REMEDIAL WORKS SCHEDULE

IMPORTANT: It is your responsibility to update the section below as and when remedials have been actioned.

Client		Leeds Yorkshire Housing Association		
Site		Estate Office Harrison and Potter Trust Homes Lovell Park Road Leeds LS2 8DA		
Date of Inspection		9th January 2019		
Inspecting Body		Water Hygiene Services Ltd		
Grade		A = Immediate B = Recommendation		
No.	Item	Description	Grade	Actioned/ Comments/ Date
1.	Training	Ensure the Responsible Person has had the relevant ACOP L8 training within the last 2 years.	A	
2.	Control Scheme	Ensure that a Control Scheme is in place, log book kept up to date and that any recommendations are actioned.	A	
3.	Little Used Outlets	Ensure that all little used outlets are flushed through at least weekly.	A	
5.	Dead Ends/Dead Legs	Cut back all dead ends as far back to the service pipe as possible. If this is not possible due to hidden pipework or other difficulties, install a flushing device and treat as a little used outlet to be flushed at least weekly.	A	
6.	Expansion Vessel	Install flush/drain valve as close to the expansion vessel as possible. Ensure this is flushed on a quarterly basis.	A	

Section 15

SCHEMATIC

Schematic to be added

Section 16

ACCREDITATION



BS EN ISO 9001 : 2015 Certification

Registration Certificate

*This document certifies that the
Quality Management Systems of*

WATER HYGIENE SERVICES LIMITED

*Have been assessed and approved by
CQS (Certified Quality Systems) Limited
to the following Management System Standard*

BS EN ISO 9001 : 2015

*The scope of this certification applies to the
Quality Management Systems relating to the following activities*

**THE PROVISION OF LEGIONELLA CONTROL AND WATER
TREATMENT SERVICES**



Certificate Issued: 19th November 2018

Certificate No: GB2002944

Expiry Date: 18th May 2019

*Should verification of the validity of this certificate
be required please contact:*

*CQS (Certified Quality Systems) Ltd
United Kingdom Head Office: +44(0)1684 571350
email: verification@cqsltd.com*

On behalf of CQS (Certified Quality Systems) Limited

EAC 35

SIC 36000

*This certificate remains valid while the holder maintains their Management Systems
in accordance with the guidelines above, which will be audited by CQS (Certified Quality Systems) Ltd or its nominee.
This certificate remains the property of CQS (Certified Quality Systems) Ltd and must be retained in the event of cancellation.*

Legionella - Water Risk Assessments in Building Water Systems

is awarded to
Keith Baldwin

Successfully completed a course delivered by Eastwood Park Training for Legionella - water risk assessments and log book awareness in building complexes. (ENRA)

The course covered

Medical aspects
Statutory and non-statutory requirements
Risk assessment
Water sampling techniques and analysis
Methods of recording information and water schematic diagrams

Written Assessments

Pass

Awarded 02 September 2011

U20911/2295-25/057925/MLH0894/MI11/06/53

5500317714/C

Michael Howell

Chris Jones

M Howell
Chairman
The City and Guilds of London Institute

Chris Jones
Director-General
The City and Guilds of London Institute

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The City and Guilds of London Institute founded 1878 and incorporated by Royal Charter 1900.
The City & Guilds Group comprises City & Guilds, ILI and City & Guilds NPTC.





Legionella Control Association

A Code of Conduct for Service Providers

Certificate of Registration

This is to certify that the following company has submitted a registration under the Conditions of Compliance as laid out in the LCA's Code of Conduct for Service Providers

Name of Company: **Water Hygiene Services Ltd**

Registration Number: **2008/1723** Certificate valid until: **31st August 2019**

Registration under the following services categories:

(1) Legionella Risk Assessment Services

- 1.1 Hot and Cold Water Services
- 1.3 Process and Other Systems
- 1.4 Healthcare Risk Assessment

(3) Hot and Cold Water Monitoring and Inspection Services

(4) Cleaning and Disinfection Services

(6) Training Services

(7) Legionella Analytical Services

- 7.1 Sampling
- 7.2 Laboratory Analysis
- 7.3 Interpretation of Analysis

(8) Plant and Equipment Services

- 8.1 Installation
- 8.2 Refurbishment

This Certificate is only valid if the Company named is listed on the LCA website www.legionellacontrol.org.uk/directory.php



Signed:

Chairman, Executive Committee

Certificate Secretary



Legionella Control Association Limited. www.legionellacontrol.org.uk

Registered in England and Wales No. 8502723

The legal duty to comply with relevant health and safety legislation (including avoidance or control of risk to exposure to Legionella bacterial risks) solely with the statutory dutyholder, being either the employer or the person in control of the premises or systems where any relevant risk is present, and this cannot be delegated. Specific functions (e.g. carrying out risk assessment) can be delegated and the Legionella Control Association (LCA) Code of Conduct is designed to help service providers, who also have duties under health and safety legislation, to establish appropriate management systems for the prevention or control of risk from Legionella bacteria. The LCA assesses the management systems of LCA members upon initial registration, reviews annually upon re-registration, and re-assesses by annual company audits. The LCA control and does not carry out other regular supervision of its members' commitments to the Code of Conduct nor their compliance with other LCA guidelines. A valid LCA certificate of registration (which is only valid if the Company named is listed on the LCA website www.legionellacontrol.org.uk/directory.php) confirms only that a service provider has installed LCA requirements at registration, re-registration and its most recent company audit. It does not confirm the service providers' status of continuing compliance with their commitments to the LCA Code of Conduct and/or other LCA guidelines. The LCA does not approve specific products or services as being effective in controlling Legionella or verify the competence of service providers' staff and sub-contractors, which is the duty of the service provider and the statutory dutyholder. The LCA accepts no liability for any omission or any act carried out in reliance on the LCA Code of Conduct or other LCA guidelines, or any loss or damage resulting from non-compliance with such documents.

Section 17

MONITORING & WATER SAMPLING RECORDS

Section 18

COMPLETION/DISINFECTION CERTIFICATION