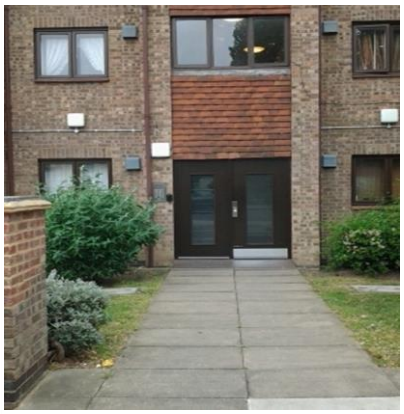
Service Delivery Report

Reference: A-111222-01-16



Legionella Risk Assessment

Client: **Mr J Spoons**

Address: **Flat 2**
Wingate Street
NW10 2ED

Survey Date: **02/06/2015**

Review Date: **02/06/2016**

GPS Location:
Latitude – 51.887638
Longitude – 0.388899

Assessor's Signature

Robert Dollimore BEng (Hons)

Checked by

Samuel Becht – Site Engineer

Complianceforlandlords.com
Unit 16, St Julians
Sevenoaks TN15 0RX
Tel:- 01732 44 64 74
Email:- info@complianceforlandlords.com

Contents

Introduction

The purpose of this risk assessment is to ascertain the risk to the occupants of the premises to exposure to legionella pneumophila bacteria. The survey was undertaken by Robert Dollimore on the 2nd June 2015. The survey was undertaken at *(…….blank……..)*.

Legionella is the bacterium that causes Legionnaires disease. Of this bacterium, Legionella pneumophila is the species most commonly associated with disease outbreaks.

Legionnaires disease is a potentially fatal form of pneumonia. The infection is most commonly acquired by the inhalation of airborne droplets or particles containing viable Legionella. Exposure to Legionella can also cause a short feverish illness without pneumonia known as Pontiac Fever.

It is known that certain groups of the population are more susceptible to the bacteria. Individuals with weakened immune systems are particularly susceptible, for example those undergoing treatment for cancer, and asthmatics and smokers.

Legionella bacteria occur naturally in most water courses. The bacteria will remain dormant at low temperatures and given the correct conditions will multiply most readily at 25-45^{o}C.

Sediment, scale, and organic materials present in water systems, can provide nutrients and give protection for Legionella. Legionella has been shown to colonise certain types of water fittings, pipework 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 habitat and nutrients in which Legionella can survive and multiply.

The formation of biofilms within water systems is undesirable and may also provide harbourage and favourable conditions for Legionella growth. The presence of Legionella in biofilms and in enclosures within protozoa may protect the organisms from any remedial measure employed to eradicate the bacterium.

The bacterium does not survive temperatures maintained consistently at 60^{o}C or above.

Legal Framework

The current requirements are controlled under The Health & Safety at Work etc Act 1974. This lays down the general framework for all health and safety regulation. Specific duties however are laid down in Regulations and Statutory Instruments. Those affecting the control of Legionella in water systems include:

- Management of Health & Safety at Work Regulations 1999
- Control of Substances Hazardous to Health Regulations (COSHH) 2002
- Reporting of Injuries diseases and Dangerous Occurrences Regulations (RIDDOR) 1995
- Legionnaires' Disease The Control of legionella bacteria in water systems APPROVED CODE OF PRACTICE & GUIDANCE (L8)
- Statutory Instrument-1992 No2225

Health & Safety- The Notification of Cooling Towers and Evaporative Condenser Regulations 199 Of these, the Management of Health & Safety at Work regulations and L8, The control of Legionella Bacteria in water systems are most relevant to domestic water systems and the control of the bacteria.

The above regulations place a duty on the employer to make a suitable and sufficient risk assessment of the risk to the health and safety of his employees and others not in his employment to which they are exposed whilst they are at work, or in connection with his business or premises.

Legionnaires' disease The control of legionella bacteria in water systems ACoP (L8) Associated Guidance HSG 274 The Control of Legionella Bacteria in Hot and Cold Water Systems

This document provides the practical advice on compliance with the requirements of the Health and safety at Work Act, Management of Health and Safety at Work Regulations and COSHH with regard specifically to the control of the legionella bacteria. Whilst not legislation it provides the guidance on how to achieve compliance with the statutory obligations set out above.

L8 requires that the following actions be undertaken:

- Identify and assess the risk
- Manage the risk
- Prevent or control the risk
- Keep suitable and sufficient records.

The assessment must take into account a number of parameters that will directly affect the proliferation and dissemination of the bacteria. These parameters are the potential for droplet formation, the condition of the water, water temperature, the turnover rate of the water, the susceptibility of those exposed to the water and the population density of those exposed to the water.

Legionnaires disease is most commonly caused by the inhalation of water droplets contaminated with the Legionella bacteria. It is therefore important that systems susceptible to colonisation by Legionella and which incorporate a potential means for creating and disseminating water droplets should be identified and the risk they present assessed.

The assessment must be completed for routine system operation and also for circumstances such as breakdown, abnormal operation, commissioning or other unusual circumstances. Once the assessment has been completed, a strategy can be prepared for preventing or controlling the risk. The strategy will be based on a sound knowledge of the varying levels of attention required by the differing risk sources within the building.

The risk assessment should be reviewed whenever there is reason to believe that the original assessment may no longer be valid and ideally a bi- annual review of all sources should be undertaken.

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 control of the system is lost, thereby allowing Legionella to proliferate.

This risk assessment is based on the conditions prevailing at the time of the survey, and any information provided at this time. The assessment of the individual assets is based on quantitive analysis of the factors previously described, however the assessment rating given to the overall system must by its very nature be regarded as qualitative and based upon the assessments of the individual assets and monitoring and maintenance regimes observed by the surveyor.

Management Personnel Definitions

DUTY HOLDER: A senior executive with budgetary control who ensures that the company/organisation complies with the law. The Duty Holder may appoint a competent Responsible Person to be in charge of day to day operation.

RESPONSIBLE PERSON: A member of staff sufficiently senior to be responsible for budget. The Responsible Person reports to the Duty Holder and ensures that all management and monitoring requirements are carried out. Additional responsibilities include ensuring that all contractors and staff are competent to carry out their duties.

OPERATIONAL STAFF: Staff whose duties include inspection, monitoring, or undertaking remedial actions. All staff should be adequately trained to safely undertake their duties.

SERVICE PROVIDER: These will include Risk Assessment Companies, Water Treatment companies, Cleaning companies etc. The customer must satisfy themselves that all staff employed by these service providers are competent to carry out their assigned work.

Description of Property

Property type	Residential
Susceptibility of occupants	As General Population
Number of occupants and visitors	5+
Is there a current Legionella risk assessment?	No
Is the property part of a block?	Yes
Name of Block	

Responsibility Structure.

Responsibility	Role	Name	Contact details
Duty Holder		None	
Site Manager		None	
Responsible Person		None	
Nominated Deputy		None	

System Summary

Number of Cold water storage Tanks	24
Number of DHW storage vessels	24
Number of Plate Heat Exchangers	0
Water Source	Thames Water
Is the system Boosted?	No
Is there a secondary return system?	No
Trace heating Installed?	No

Management Systems & Record Keeping

Is there a control scheme present?	No
Is there a management structure?	No
Are roles & responsibilities clearly defined?	No
Are contact details present?	No
Are all staff trained?	No
Are training certificates present?	No
Are there written procedures for complying with the scheme?	No
Are schematics present?	Yes
Are control Parameters set down?	No
Is there a faults/defects system?	No
Are records of disinfection present?	No
Are records of ongoing chemical treatment present?	N/A
Six Monthly Cold storage tank records	No
Annual Cold water storage tank records	No
Monthly calorifier records	N/A
Annual Calorifier records	N/A
Monthly Sentinal Points	No
Flushing records for intermittently used outlets	No
Showerhead descaling and disinfection	N/A
Annual temperature profile	No
Six monthly TMV	N/A
Annual TMV	N/A
Weekly Softener	No

Recommended Remedial Action

Management Systems & Record Keeping

Action	Priority
Ensure copy of the legionella policy is distributed to site. This should detail the management structure and identify individuals with specific responsibilities, contact details etc. Training certificates of all staff should also be held.	High
Ensure management structure is present, detailing roles and contact details of all individuals	High
Appoint duty holder, responsible person and deputy	High

Cold Water Storage

Location	Loft Tankroom
Asset ID	CWST 1 -> CWST 24
Safe access?	Good
Serving?	DHWS & DCWS
Linked?	No
Material of construction	Plastic
Is vessel insulated	Yes
Is pipework insulated	Poor
Close fitting Lid	No
Lid vent	No
Overflow screen	No
Warning pipe and screen	No
Inlet and outlet fully opposed	No
Inlet temperature	15.9
Storage temperature	16
Scale	High
Corrosion	None
Biofilm	None
Stagnation	No
Sediment	Heavy
Deadlegs on local pipework	None

Recommended Remedial Action

Action	Priority
Upgrade CWST to comply with requirements of L8 and the current Water Regulations, i.e install lid vent and overflow screen	High Priority
Investigate open vent discharging to CWST	High Priority
Clean and disinfect all CWST	High Priority

Hot Water Storage

Location	Ground Floor flat 5, hall cupboard
Asset ID	HW
Safe access?	Good
Serving?	Flat 5 DHW
Heat Source	Electric immersion
Linked?	No
Number of linked vessels?	0
Dimensions	0.7m x 1.2 m
Material of construction	Copper
Insulated	Adequate
Drain fitted	Yes
Horizontal/vertical	Vertical
Flow and return gauges fitted	No
Flow temperature	55
Return Temperature	50
Can vessel achieve 60°C throughout during Low draw periods	Yes
Destratification pump fitted	No
Destrat pump timer controlled?	No
Circulation pump	Yes
Pipework insulated?	Yes

Recommended remedial action

Action	Priority
No remedial action required	

Domestic Hot and Cold Water.

Location	Fitting	Hot Temp	Cold Temp	Comment
Flat 5, Kitchen	Kitchen sink	46	16	Scale
Flat 5 Bathroom	Bath	73	15	Scald Hazard,
Flat 5 Bathroom	Shower	73	16	Scald Hazard

Recommended Remedial Action

Action	Priority
Reduce HW discharge temperature to less than 62 deg C to minimize Scald Hazard	High Priority
Descale outlets as part of a planned preventative maintenance regime	Medium Priority

Photographs

HW Cylinder

CWST In Loft Space

CWST Sediment For Flat 2

Summary & Conclusion

Management Systems & Record Keeping

Action	Priority
Ensure copy of the legionella policy is distributed to site. This should detail the management structure and identify individuals with specific responsibilities, contact details etc. Training certificates of all staff should also be held.	High
Ensure management structure is present, detailing roles and contact details of all individuals	High
Appoint duty holder, responsible person and deputy	High

Cold Water Storage
Recommended remedial action

Action	Priority
Upgrade CWSt to comply with requirements of L8 and the current Water Regulations, i.e install lid vent and overflow screen	High
Investigate open vent discharging to CWST	High
Clean and disinfect all CWST	

Hot Water Storage
Recommended remedial action

Action	Priority
No remedial action required	

Domestic Hot and Cold Water Outlets
Recommended remedial action

Action	Priority
Reduce HW discharge temperature to less than 62 deg C to minimize Scald Hazard	High
Descale outlets as part of a planned preventative maintenance regime	Medium

Building Risk Rating

Three levels of risk may be assigned to any given site, Low, Medium or High. These are based on the conditions observed on site, and implemented management procedures, if any and combined with the presence of any susceptible persons at the address.

A high risk property will require immediate control measures to be implemented. This may take the form of physical remedial work, such as system cleaning, disinfection or temperature modification. Medium risk properties will require some control measures to be programmed within a reasonable time. Low risk properties should continue to be monitored to ensure risk levels do not increase significantly

Overall Risk Rating

Low
Medium
High

The overall risk rating for each property has been evaluated in conjunction with other influences observed during the course of the survey and with consideration for system breakdowns, abnormal operations, commissioning and other unusual circumstances.