



Legionella Risk Assessment



Address

Risk Assessment Date – 13th April 2015
Recommended Review Date – April 2017

Prepared for – Landlord/Agent

Disclaimer

This survey was carried out only on the parts of the building which were made accessible to the risk assessor. Any water services found in any part of the building, which was not made available, are not included in this report. The exclusion of these systems does not indicate absence.

Legionella Risk Assessor – Kevin Dempsey

Introduction

Legionella Edinburgh has been commissioned by the Responsible Person to prepare a report, which identifies and assesses potential risk from legionella at the above address.

Legionellosis and Legionnaires' disease

Legionellosis is the collective name given to the pneumonia-like illness caused by legionella bacteria. This includes the most serious Legionnaire's disease, as well as the similar but less serious conditions of Pontiac Fever and Lochgoilhead Fever. Legionnaire's disease is a potentially fatal form of pneumonia and everyone is susceptible to infection. The risk increases with age, but some people are at higher risk, including;

- People over 45 years of age
- Smokers and heavy drinkers
- People suffering from chronic respiratory or kidney disease, diabetes, lung and heart disease
- Anyone with an impaired immune system

The bacterium *Legionella pneumophila* and related bacteria are common in natural water sources such as rivers, lakes and reservoirs, but usually in low numbers. Since legionella bacteria are widespread in the environment they may also contaminate and grow in purpose-built water systems such as hot and cold water systems.

Legionnaires' disease is normally contracted by inhaling tiny droplets of water (aerosol) which are contaminated with the legionella bacteria. Person to person spread of the disease has not been documented.

Legionella bacteria require certain conditions to multiply including moderate temperature, adequate food supply and shelter. Therefore the main aspect of legionella control is to ensure that you do not have suitable conditions within your water system to potentially allow the legionella bacteria to multiply.

Legislation

Landlords in the private rented sector have a duty of care under the Health and Safety at Work Act and Control of Substances Hazardous to Health (COSHH) Regulations to ensure that the risk of exposure of tenants to legionella is properly assessed and controlled. This is done through carrying out a formally recorded risk assessment and implementing measures to control any identified risk.

Accordingly, the Responsible Person should ensure that the property's water supply, storage and distribution services comply with the best practice guidance given in the HSE's Approved Code of Practice and Guidance "Legionnaires' disease – The control of legionella bacteria in water systems" (also known as ACOP L8) and HSG 274 "Legionnaires' Disease – Technical Guidance".

Responsible Person – Landlord/Agent

Property Type – 1 Bedroom Flat

Are people within the high risk health category exposed to the water system in this property? Unable to confirm so must assume “Yes”

Cold Water Supply – Mains, Cold Water Tank

Domestic Hot Water Supply - Hot Water Cylinder

Significant aerosol generators present ie showers – Yes (Electric shower)

Other Risk Systems present (please specify) – NA

Cold Water Supply

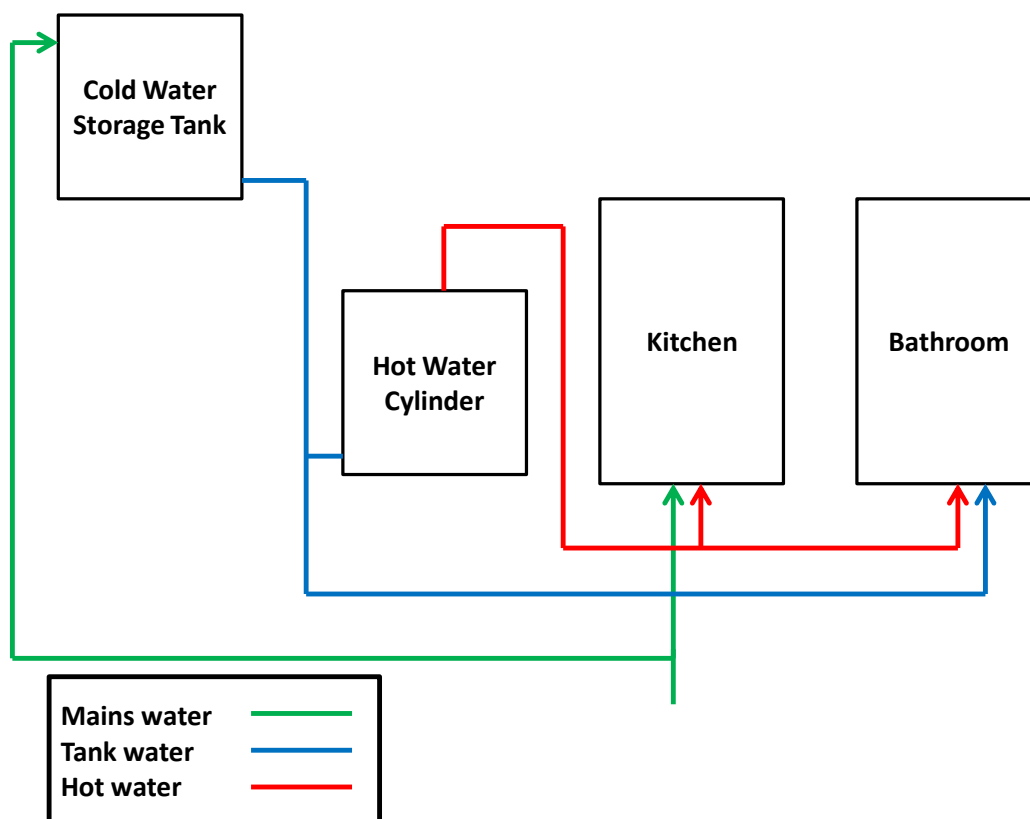
Mains Water and Cold Water Storage Tank – The property has a direct mains supply of wholesome water which is chlorinated and will be of good microbiological quality.

See cold water storage tank survey sheet for more details

Hot Water Supply

See hot water cylinder survey sheet for more details.

Water Systems Schematic



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Down Services Asset Register and Temperature Measurements

LOCATION	WASHING MACHINE	DISHWASHER	SINKS/WASH HAND BASINS	SHOWERS	BATHS	WCs	HOT TEMPERATURE °C	HOT FED BY	DOES HOT WATER TEMP CONFORM?	COLD TEMPERATURE °C	COLD FED BY	DOES COLD WATER TEMP CONFORM?
Kitchen	1		1				18	HW1	No	8	Mains	Yes
Bathroom			1	1	1	1	18	HW1	No	17	CW1	Yes

Findings from Water System Inspection

Dead Legs

Dead legs allow water to stagnate in the pipe work and potentially allow suitable conditions for bacteria to multiply. Dead legs can be sections of old pipe which are no longer used or a system design which results in low or no flow through water

- No dead legs were observed during the risk assessment.

Little Used Outlets

A regularly used water system is important in maintaining good water quality. Where any outlet is not used at least once a week it should be flushed for a period of five (5) minutes to prevent water stagnating in the pipe work. Aerosol production should be minimised during flushing ie by cracking outlet open so water does not run at full force.

- No little used outlets were observed during the risk assessment.

Cold Water Storage Tank Survey Sheet

Tank Reference	CW1
Tank Location	Hall cupboard
Accessibility to tank and internal surfaces	Poor – top of tank difficult to access due to proximity to door frame and ceiling
Connected directly to other tanks?	No
Services supplied	HW1, Bathroom
Construction material	Plastic
Lid material	Plastic
Fitting of lid	Poor – not tight fitting, cut in half
Screened air vent present	No
Overflow fitted	Yes
Overflow screened	No
Insulation details	No insulation fitted
Suitability of insulation	Poor
Are isolation valves present on the inlet pipe/s?	Yes
Are isolation valves present on the outlet pipe/s?	Yes
Is there an expansion vessel?	No
Is there an open vent from a Hot Water Cylinder over tank?	No
Signs of discharge from open vent?	Na
Position of mains inlet and outlet/s	Not on opposite sides of tank
Internal coating	No
Bacterial growth	No
Sediment	Yes
Scale Present?	Yes
Rust Present?	No
Water Appearance	Clear
Flotsam	No
Clean and disinfection	Yes
Residence time of stored water	1 Day

Cold Water System Photos

Cold water tank – not insulated, lid not tight fitting, access difficult



Internal condition of cold water tank



Hot Water Cylinder Survey Sheet

Cylinder Reference	HW1
Cylinder Location	Hall cupboard
Accessibility to Cylinder	Good
Connected directly to other cylinder?	No
Supplied from	CW1
External expansion vessel?	No
Services Supplied	Bathroom, Kitchen
Make and model	Unknown
Age	Unknown
Orientation	Vertical
Method of heating	Electric immersion
Access to internal surfaces?	No
Drain valve present?	Yes
Drain valve accessible?	Yes
Temp. Gauge present – reading (°C)	No
Secondary Pumps	No
Destratification Pump	No
Insulation Details	Hard foam
Suitability of Insulation	Good

Hot Water System Photographs

Hot water cylinder



Bathroom shower head (electric shower)



Recommendations

Priority Rating

	High Priority Issue – Urgent remedial action required to control a serious risk
	Medium Priority Issue – Action is required in the near future to achieve compliance with ACOP L8 standards/guidance
	Low Priority Issue – Minor action or remedial work that is beneficial but may not be directly linked with compliance to ACOP L8

High

No high priority issues

Medium

1. At the time of the inspection the hot water temperatures in the property were recorded as being below 50°C. This was due to the hot water cylinder being switched off. Recommend that the temperature of the hot water be checked after the cylinder has been switched on to confirm that water is being heated to above 50°C.

2. Cold water tank does not meet current regulations; insulation not fitted, sediment and scale in tank, overflow pipe not screened, lid not tight fitting, no screened air vent, inlet and outlet pipes not on opposite sides of the tank. Recommend remedial works be carried out by a WaterSafe approved plumber to ensure the tank complies with the current Scottish Water Byelaws and that the tank be cleaned and disinfected.

Given how the tank has been installed in the hall cupboard and the difficulty in accessing the tank it may not be possible to carry out the remedial works and cleaning outlined above. If this is the case we would recommend that the hot water cylinder and cold water tank be removed and replaced with a modern unvented hot water cylinder.

Low

No low priority issues

Legionella Control Programme

The following control programme is proposed for the water services in this property and is based on Table 2.1 of HSG 274, Part 2.

Cold Water Services

The cold water temperatures were recorded below 20°C at the time of assessment and are considered unlikely to increase above this value therefore no further measures are required until the recommended review date unless specified below.

Inspect cold water tank on an annual basis and carry out remedial work where necessary. The tank water temperature should be checked remote from the ball

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valve and the incoming mains temperature during the inspection. If the temperature exceeds 20°C remedial work will be required.

Hot Water Services

On the basis that the hot water temperatures are recorded above 50°C once the hot water cylinder is turned on no further measures are required until the recommended review date unless specified below.

1. Inspect the calorifier internally by removing the inspection hatch or using a boroscope and clean by draining the vessel on an annual basis
2. Where there is no inspection hatch, purge any debris in the base of the calorifier to a suitable drain on an annual basis. Collect the initial flush from the base of hot water heaters to inspect clarity, quantity of debris and temperature.

Shower Heads

Dismantle, clean and descale removable parts, heads and hoses where fitted on a quarterly basis or as indicated by the rate of fouling.

Unoccupied Property

The risk may increase where the property is unoccupied for a short period. It is important that water is not allowed to stagnate in the water system and so properties that are vacant for an extended period should be managed carefully. As a general principle, outlets on hot and cold water systems should be used at least once a week to maintain a degree of water flow and minimise the chances of stagnation. To manage the risks during non-occupancy, consider implementing a suitable flushing regime or other measures, such as draining the system if the property is to remain vacant for long periods.