CHEMTECH CONSULTANCY LTD | AWT WATER & ENVIRONMENTAL SERVICES

LEGIONELLA RISK ASSESSMENT

DOMESTIC WATER SYSTEMS

CUSTOMER: ROSEHILL HOUSING ASSOCIAITON

SITE: 45 SEAMILL STREET

SURVEYED BY: STUART FLYNN

SURVEY DATE: 4 NOVEMBER 2020

Registered Office:
East Fulton Farm, Darluith Road, Linwood, PA3 3TP
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1.SITE DETAILS AND INITIAL ASSESSMENT

AIM OF THE RISK ASSESSMENT

The aim of this risk assessment is to enable the owner to make an informed decision regarding the adequacy of the water systems currently in place to minimise the risk to health from legionellosis to both building occupants and the general public.

IDENTIFICATION AND THE ASSESSMENT OF RISK

Each system section has an explanation of the risk possible followed by the actual risk found and reported based on the grading system below. This will enable the responsible person to prioritise future actions.

Low Risk Medium Risk High Risk

We have designated all of the areas of non-compliance into 3 categories.

Category 1 – Immediate action is required
Category 2 – Action to be taken as soon as is practically possible.
Category 3 – Action to be taken within a year. If not possible to do so, then put on a rolling programme

SCOPE AND LIMITATIONS OF ASSESSMENT

The findings and recommendations presented in this report have been based on information made available and inspection of areas made accessible by site during the survey. ChemTech Consultancy Ltd are only able to assess areas / systems, which they have been given access to and using information supplied. This survey was undertaken only on pipework/areas that were accessible and visible; it is possible that some sections remained hidden during the survey.

No responsibility can be accepted for systems and / or areas, which ChemTech Consultancy Ltd have not been provided access to, or as a result of incorrect / misleading information supplied or not provided.

The scope of this Legionella Risk Assessment is such that it includes all hot and cold water systems and outlets within the property but that it does **not** include any other water system out with the boundaries of the property itself. This risk assessment includes the supply of schematics but Legionella pneumophila and microbiological sampling and analysis are not included in this legionella risk assessment.

IDENTIFICATION AND INITIAL ASSESSMENT OF SYSTEMS ON SITE

	Present:	No of Systems / units present	Risk of Legionellosis
Town Mains Cold Water Supply	Yes	1	Low
Domestic Cold Water Distribution Systems	Yes	1	Low
Combination Boiler	Yes	1	Low
Stored Hot Water Heaters (15L or more)	No	0	-
Domestic Hot Water Distribution Systems	Yes	1	Low
Showers (Individual number)	Yes	1	Medium
Temperature Mixing Valves (TMVs)	No	0	-

SYSTEM IDENTIFICATION

Below is a list of all of the water systems identified on site, what supplies each system and what they in turn feed.

System ID Number	1	System Type	Mains Water System	Asset Location	Under Kitchen Sink
System supplies	This system is fed from the towns main and supplies all cold water outlets, electric shower and combination boiler.				

System ID Number	2	System Type	*Hot Water Distribution System*	Asset Location	Kitchen
System supplies	This system is fed from the combination boiler and supplies all hot water outlets.				

OVERVIEW AND ASSESSMENT

ChemTech Consultancy Ltd was commissioned by Kelly McCallum of Rosehill Housing Association to carry out a Legionella Risk Assessment at 45 Seamill Street.

The property's water services are supplied by the town's main and supplies all cold water outlets, electric shower and combination boiler.

The main areas of concern identified from the risk assessment are:

- Showerheads and hoses should be cleaned, descaled and disinfected quarterly.
- It was observed that flexible hoses are fitted. Flexible hoses should be removed and replaced with seamless copper or WRAS approved hoses.
- Insulation should be fitted to all hot and cold water pipework to reduce thermal loss or gain.

For details of all findings and subsequent recommendations; please refer to the surveys within the document.

As a landlord it is important that you have a void policy and procedure which ensures that when a property is handed over to a new tenant is in a fit and clean condition, compliant with the Scottish Water Byelaws 2014 and Approved Code of Practice L8 'The control of legionella bacteria in water systems' 2013. This will comprise a check list of areas that have been inspected at the time of handover and details of any actions required to ensure compliance with the above regulations.

It is advised that you provide a basic advice note to all new tenants on the precautions and measures that they should take to minimise their exposure to legionella bacteria. Both of these documents are enclosed in the appendix.

RISK ASSESSMENT RATING: MEDIUM

REVIEW POLICY

Based on the type of water systems at this site along with the low possibility of bacterial colonisation due to the lack of any stored water and the high turnover of water within the property, it is our judgement that this assessment should not be reviewed unless the water systems or conditions of use change. In this case it should be reviewed as soon as possible.

2. GENERAL LEGIONELLA MANAGEMENT

Summary of Risk Potential

Landlords who provide residential accommodation, as the person in control of the premises or responsible for the water systems in their premises, have a legal duty to ensure that the risk of exposure of tenants to legionella is properly assessed and controlled. This duty extends to residents, guests and tenants. They can carry out a risk assessment themselves if they are competent, or employ somebody who is if they are not.

Where a managing (or letting) agent is used, the management contract should clearly specify who has responsibility for maintenance and safety checks, including managing the risk from legionella. Where there is no contract or agreement in place or it does not specify who has responsibility, the duty is placed on whoever has control of the premises and the water system in it, and in most cases, this will be the landlord themselves.

RISK ASSESSMENT RATING: MEDIUM

TABLE OF RESPONSIBILITIES					
Nominated Facilities or Maintenance Company	*Company Name*	-	*Nominated Letting Agent Hot Water Disrabution System*	*Company Name*	Rosehill Housing Association
	Contact Name	-		*Contact Name*	Kelly McCallum
	Contact No.	-		*Contact No.*	0141 881 0595
	Address	-		*Address*	250 Peat Road, Glasgow

MANAGEMENT QUESTIONS	ANSWER	COMMENT	LEGISLATION
Has a risk assessment previously been carried out?	No	No evidence at time of assessment	ACoP L8: Para 28
Are all duties to be carried by tenants and sub-contractors being completed?	No	No evidence at time of assessment	ACoP L8: 2013: Para 65
Is there a void policy / handover checklist available from landlord?	No	Supplied with this assessment	HSG 274 Part 2: Para 2.144
Is there a guidance note available for new tenants on management of water systems?	No	Supplied with this assessment	HSG 274 Part 2: Para 2.143

3. WATER SOURCE

Summary of Risk Potential

The water supply to a premises in itself, presents a low legionella risk due to the temperature of the incoming water. Generally water into premises is well below control temperature and even though legionella is a naturally occurring bacterium in the water, the temperature will render the bacteria dormant.

RISK ASSESSMENT RATING: LOW

Location	Under Kitchen Sink	*Recommendations / Comments*
System ID No.	1	**CATEGORY: 3** Lag pipework to reduce any possible thermal gain or loss.
Type	Town Mains	
Supply company	Scottish Water	
Labelled	No	
Insulation	No	
Material	Unknown	
Drain / injection point	Unknown	
Temperature	11.4°C	
Isolation valve	Yes	
Accessibility	Satisfactory	
Additional comments	Access to isolation valve only.	
Level of Risk	**LOW**	

4. COMBINATION BOILER / WATER HEATER

Summary of Risk Potential

Water heaters present a low legionella risk, however when the heater's water supplies other associated plant which may have a high risk potential (e.g. showers etc.), the potential risk from such water heaters is significantly higher. Poor control over the water temperature and condition of the water heaters are the most significant factors in determining the risk presented by hot water heaters to the down water services.

RISK ASSESSMENT RATING: LOW

Combination Boiler

Location	Kitchen			***Recommendations***
System ID No.	2			**CATEGORY: 3** Lag pipework to reduce any possible thermal gain or loss. **HSG 274 Part 2: Para 2.36 & 2.37**
How is the water heated?	Gas			
Is supply pipe fitted with check valve?	Yes			
Materials / Manufacturer	Copper			
Is the heater working and in regular use?	Yes			
Temperatures	Cold supply	Hot outlet	Gauge	
	11.6°C	58.9°C	54°C	
Dead ends on Pipework	No			
Non WRC Materials	No			
Is the pipework insulated?	No			
Is there an expansion vessel fitted?	Yes			
Is the quick fill loop still connected?	No			
Condition / Comments	-			
Level of Risk	**LOW**			

5. HOT AND COLD OUTLETS

HOT & COLD WATER OUTLETS

Summary of Risk Potential

Hot and cold water outlets do not normally present a risk for the development of Legionnaires' disease unless the outlets create fine droplets or spray. Outlets that do create sprays / droplets significantly increase the risk. Water temperature, tap design and cleanliness of the outlet are the most significant factors in determining the risk potential.

RISK ASSESSMENT RATING: MEDIUM

SHOWERS AND OTHER SPRAY OUTLETS

Summary of Risk Potential

Since showers and spray outlets produce fine water droplets they present a significantly higher risk for the development of Legionnaires' disease than other types of hot and cold outlets. Water temperature, showerhead (Spray head) design, frequency of use and cleanliness of the outlet are the most significant factors in determining the risk potential.

Showers supplied via storage tanks, blending valves and temperature mixing valves pose greater risk of bacteria proliferation due to the design of the pipework and stagnated water stored in pipework pre mixing.

Mains supplied electrical showers present a significantly lower risk of bacterial population and dispersion due to the water source for this type of outlet. Although an aerosol is produced, the temperature of the water source would render any legionella bacteria dormant.

RISK ASSESSMENT RATING: MEDIUM

Location		Kitchen	Bathroom	**Recommendations**
System ID No(s)		1 and 2	1 and 2	**CATEGORY: 2** Clean + disinfect showerheads and hoses quarterly. **HSG 274 Part 2: Table 2.1**
Dead Ends		None Visible	None Visible	
Spray Potential		Low	High	
Cold temp after 2 min (˚C)		11.1	11.4	
Hot temp after 1 min (˚C)		56.8	55.9	
No of TMV's in location		-	-	
TMV	Cold In (˚C)	-	-	
	Hot In (˚C)	-	-	
	Mixed Out (˚C)	-	-	
Frequency of Use		Daily	Daily	
Additional Comments		-	-	
Outlets in Location		Sink, Washing Machine.	WC Cistern, Bath, Wash hand basin, Electric Shower.	
Additional Localised Risk		**LOW**	**MEDIUM**	

6. PHOTOGRAPHS


Mains Isolation Valve


Combination Boiler


Representation of Flexible Hoses

7. CONTROL MEASURES

L8 Legionella Management Procedure / Policy to be implemented

1. Create void policy.

The void policy should detail what works will be carried out as one tenant is moving out and what should be completed in advance of a new tenant moving in. The policy should also state the conditions that would trigger a review of the risk assessment of the premises.

2. Produce awareness pack to provide to new tenants.

Tenants to be made aware of the temperature at which the hot water should be stored, how often the showerhead should be cleaned and what to do if the water system is not used for an extended period.

3. Ensure handover procedure is followed.

All works as per the void policy should be completed and the awareness pack should be given to the new tenant. Signatures and dates should be put onto a register to be kept for future reference.

4. Water outlet temperatures and showerhead condition to be added to 6 monthly inspection routine.

New checklist to be created to include for taking temperatures at the water outlets as well as an inspection of the showerhead(s).

8. ATTACHMENTS

LEGISLATIVE REQUIREMENTS

In 2014 an additional set of advice documents were released by the Health & Safety Executive to help people to understand their responsibilities in relation to Approved Code of Practice & Guidance (L8:2013). Within the Health & Safety Guidance (HSG) Number 274 Part 2 it gives the following guidance: -

Residential accommodation: Landlords

2.138 Landlords who provide residential accommodation, as the person in control of the premises or responsible for the water systems in their premises, have a legal duty to ensure that the risk of exposure of tenants to legionella is properly assessed and controlled. This duty extends to residents, guests, tenants and customers. They can carry out a risk assessment themselves if they are competent, or employ somebody who is.

2.139 Where a managing (or letting) agent is used, the management contract should clearly specify who has responsibility for maintenance and safety checks, including managing the risk from legionella. Where there is no contract or agreement in place or it does not specify who has responsibility, the duty is placed on whoever has control of the premises and the water system in it, and in most cases, this will be the landlord themselves.

2.140 All water systems require a risk assessment but not all systems require elaborate control measures. A *simple* risk assessment may show that there are no real risks from legionella, but if there are, implementing appropriate measures will prevent or control these risks. The law requires simple, proportionate and practical actions to be taken, including identifying and assessing sources of risk, managing the risk, preventing or controlling the risk; and periodically checking that any control measures are effective.

2.141 For most residential settings, the risk assessment may show the risks are low, in which case no further action may be necessary, eg housing units with small domestic-type water systems where water turnover is high. If the assessment shows the risks are insignificant and are being properly managed to comply with the law, no further action may be required, but it is important to review the assessment periodically in case anything changes in the system. However, the frequency of inspection and maintenance will depend on the system and the risks it presents.

2.142 Simple control measures can help manage the risk of exposure to legionella and should be maintained, such as:

- flushing out the system before letting the property;
- avoiding debris getting into the system (eg ensure the cold water tanks, where fitted, have a tight-fitting lid);
- setting control parameters (eg setting the temperature of the calorifier to ensure water is stored at 60 °C);
- making sure any redundant pipework identified is removed;
- advising tenants to regularly clean and disinfect showerheads.

2.143 Landlords should inform tenants of the potential risk of exposure to legionella and its consequences and advise on any actions arising from the findings of the risk assessment, where appropriate. Tenants should be advised to inform the landlord if the hot water is not heating properly or if there are any other problems with the system, so that appropriate action can be taken.

2.144 The risk may increase where the property is unoccupied for a short period. It is important that water is not allowed to stagnate within the water system and so dwellings that are vacant for extended periods 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 dwelling is to remain vacant for long periods.