SMS Environmental Ltd
Quad One
Becquerel Avenue
Harwell Campus
Didcot
OX11 0RA

Risk Assessment (UKAS Accredited)

Task Information

ID	1051983
Task Category	Legionella
Building	3CH00808_Alcote House
Building Address	Alcote Road, Shotton
Building Code	3CH00808
Assigned Users	Ethan Jones (16/07/2024 16:00:00)
Finished By	Ethan Jones (16/07/2024 11:34:32)
Description	Risk Assessment (UKAS Accredited)
Further Information	Legionella risk assessment to be completed in line HSG274 part 2 , all areas of the building are to be included , including any commercial areas

Client Details

Code	SR7 7TT	**Contact**	Andrew Graham
Name	Believe Housing	**Phone**	0300 131 1999
Address	Coast House, Spectrum 4, Spectrum Business Park, County Durham		

Client Details

Site Name	3CH00808_Alcote House
Site Address	Alcote Road, Shotton
Site Contact	Andrew Graham / Sinead Croucamp
Site Postcode	DH6 2RB
Telephone Number	07901510712 / 01918143081 / 01918143152
Client	Believe Housing
Client Address	Coast House, Spectrum 4, Spectrum Business Park, County Durham
Client Postcode	SR7 7TT
Risk Assessor	Ethan Jones
Quality Controlled By	Samantha Carter
Date of Survey	16/07/2024
Issue Date	26/07/2024
Name of the person who receive risk assessment	Emma Jorgenson
Site Photograph	 Site
Recommended Review Date	16/07/2026

Risk assessment should also be reviewed whenever there is reason to believe that it is no longer valid. This could be due to change of building usage or installation of new plant and equipment or following a case of Legionnaires Disease. In the event of the outbreak of legionellosis please refer to HSG274 Part 2 Appendix 2.3 http://www.hse.gov.uk/pUbns/priced/hsg274part2.pdf This Risk Assessment has been carried out in accordance with HSE ACoP L8, BS 8580-1:2019, ISO 17020, HTM 04-01 (Healthcare Site Only) and HSG274 Part 2

Note: A separate assessment is required for each building or site.

Template Version: 260923

Document Version Control:	Version 1
Overall Legionella Risk Rating	Low

Overall Scalding Risk Rating	Low

Table of Contents

Risk Assessment Methodology

Scope Of The Risk Assessment	To complete a UKAS accredited legionella risk assessment of the domestic water system
Any health and safety risks noted as part of this risk assessment are done so for guidance only and fall outside the scope of our UKAS accreditation.	No health and safety risks noted
Risk Assessment Methodology	
Step 1: Identify The Hazards	
Step 2: Decide Who Might Be Harmed And How	
Step 3: Evaluate The Risks	
Step 4: Decide On Precautions Or Controls	
Step 5: Record Findings And Implement Them	
Step 6: Review Your Findings And Update If Necessary	
Site Description	The property is used as a community centre. The water system consists of an incoming mains which feeds all cold water outlets and calorifier 01. The calorifier feeds all the domestic hot water outlets in the property. There is an expansion vessel and thermostatic mixing valves located on the water system.
Limitations Of The Risk Assessment	Due to the layout of the pipework in the building, the assessor is unable to fully trace it throughout the premises. The assessor will need to make assumptions on the layout based upon visible pipework and information provided by on site staff. The assessor is limited by the available information provided by staff and legionella logbook. The risk assessment includes a representation of the different configurations and/or make of water assets in the property. Although a representation is present in the assessment, the assessor checks all the water assets that meet the criteria of assessment and if there is anything of interest that would benefit the assessment, they will be added as well.
If there are limitations how could they impact on the outcome of the risk assessment?	Where appropriate / necessary, any limitations may have an impact on the overall risk rating of this assessment.
Profile of the Building Users and how they may be harmed?	The properties water system will be used by staff, clients and contractors. An average demographic of people will use the water system and it is reasonable to assume that there may be users, that have a higher susceptibility to legionella bacteria and scald risks.
Has this site or area been defined as Augmented Care?	No
Has there ever been a case of Legionnaires Disease associated with this site?	None observed

Has Legionella bacteria been ever isolated from the water system?	None observed
Current method used to control Legionella?	Temperature
Notes on control method:	Observed control measures were observed to be consistent
Does this site have a current Legionella Logbook?	Yes - Digital Logbook and On Site Logbook
Who was interviewed during the assessment?	Andrew Graham
Who was your competent escort on site?	Andrew Graham

This UKAS Accredited risk assessment is was produced using documented in-house methods based on ACoP L8 and BS 8580-1:2019. Method reference numbers are: MS80 & IMS75.

This Risk Assessment has been carried out in accordance with the requirements of ISO17020 Clause 4 Impartiality and Independence as described in the SMS Environmental IMS76 Impartiality Policy.	No threats to impartiality or independence was observed at the time of the assessment

Risk Assessor competence has been checked and established using the procedure detailed SMS HR57 Legionella Risk Assessor Training & Competency Program and UKAS RG9 Accreditation of Bodies Undertaking Legionella Risk Assessment Activities, competency checks form part of the UKAS accreditation process.

I confirm I have the necessary training, skills, experience and knowledge to complete a competent risk assessment of this type of system (INSERT NAME).	Ethan Jones

Management Personnel

STATUTORY SITE DUTY HOLDER

A senior executive with budgetary control who ensures that the operation complies with the law, by appointing and overseeing a competent Responsible Person. All appointments should be made and accepted in writing.

NOMINATED RESPONSIBLE PERSON

This person would report to the statutory site duty holder and have day-to-day responsibility for ensuring that operational duties are carried out in a timely and effective manner and ensuring the adequate training and competence of themselves, operational staff and any contractors or subcontractors. This person should also be responsible for the accurate audit of the Site Log Book.

OPERATIONAL STAFF

Staff whose duties include inspection, monitoring, implementing, record keeping and carrying out of remedial actions. There should be adequate record keeping of their on-going training and regular assessment of their competence.

SERVICE PROVIDERS

For example: Risk Assessors, monitoring companies, Consultants, and contractors carrying out such duties as water treatment and cleaning and disinfection. Information should also be available to show the competence of individuals and the contact details of all relevant personnel within the service provider company

The Client should satisfy himself that:

- Each of the above can be clearly identified;
- That they are aware of the contact details of others in the chain of command;
- Each role has a competent Deputy identified;
- That each post has been accepted in writing; and
- That there is a separate sheet for each position showing training records and competency assessment.

* It is the responsibility of the Nominated Responsible Person to ensure that Logbooks are kept up to date and that actions are implemented.

Is the liaison and communication between the duty holder and the responsible person effective?	From the observed documents and records in the legionella logbook. It would appear that a good method of control for the water system is in place.
In a healthcare setting, is the liaison and communication between the duty holder, the responsible person, and the Water Safety Group effective and robust?	Not applicable

Nominated Authorities

DESIGNATION	NAME	POSITION	TELEPHONE NO
STATUTORY DUTY HOLDER	Alan Smith	Chief Executive	03001311999
NOMINATED RESPONSIBLE PERSON	Emma Jorgenson	Compliance Manager	0191 8142900 / 07384523636
DEPUTY NOMINATED RESPONSIBLE PERSON	Andrew Graham	Compliance Officer	0191 8143081 / 07901510712
OPERATIONAL STAFF 1	-	-	-
OPERATIONAL STAFF 2	-	-	-
OPERATIONAL STAFF 3	-	-	-
SERVICE PROVIDERS	SMS Environmental Ltd	Legionella Risk Assessors	01235 835 835
SERVICE PROVIDERS	HSL Compliance Ltd	Water Monitoring Contractor	078233499745 / 07909706236

Risks of Exposure to Legionella Bacteria Health and Safety Law[1]

Duties under the **Health and Safety at Work etc. Act 1974** apply to the risks from exposure to legionella bacteria that may arise from work activities. **The Management of Health and Safety at Work Regulations 1999** provide a broad framework for controlling health and safety at work. As well as requiring risk assessments, they also require employers to have access to competent help in applying the provisions of health and safety law; to establish procedures for workers if there are situations presenting serious, imminent danger; and for co-operation and co-ordination where two or more employers or self-employed people share a workplace. More specifically, COSHH provides a framework of actions designed to control the risk from a range of hazardous substances, including biological agents.

Only the courts can give an authoritative interpretation of law on the application of these Regulations and guidance to people working under another's direction. If people working under the control and direction of others are treated as self-employed for tax and national insurance purposes, they may nevertheless be treated as employees for health and safety purposes. So, it may be necessary to take appropriate action to protect them. If there is any doubt about who is responsible for the health and safety of a worker, clarify this and include it in the terms of a contract. However, a legal duty **under section 3 of the HSW Act** cannot be passed on by means of a contract. You will still have duties towards others under section 3 of the HSW Act. If you employ workers on the understanding that they are responsible for their own health and safety, seek legal advice before doing so.

For section 3 to apply:
a) there must be a duty holder – either an employer or a self-employed person; and
b) there must be a risk to the health or safety of a person who is not an employee of the duty holder or the self-employed duty holder themselves; and
c) that risk must arise from the conduct of the duty holder's undertaking. 'Undertaking' means 'enterprise' or 'business'.
Section 3 does not apply to:
d) welfare issues (such as the provision of toilets or washing facilities);
e) nuisance or amenity issues that have no health or safety implications (such as unpleasant smells arising from work activities);
f) poor workmanship, where trading standards or contractual remedies may exist, unless they have demonstrably compromised health and safety.

Control of substances hazardous to health regulations 2002 (as amended in 2004) (COSHH) provides a framework of actions designed to control the risk from a range of hazardous substances, including biological agents. The essential elements of COSHH are:
a) risk assessment;
b) where reasonably practicable, prevention of exposure or substitution with a less hazardous substance, or substitution of a process or method with a less hazardous one;
c) control of exposure, where prevention or substitution is not reasonably practicable;
d) maintenance, examination and testing of control measures;
e) provision of information, instruction and training for employees;
f) health surveillance of employees (where appropriate, and if there are valid techniques for detecting indications of disease) where exposure may result in an identifiable disease or adverse health effect.

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[1]HSE (2013) Legionnaires' disease: The control of legionella bacteria in water systems Approved Code of Practice and guidance on regulations L8 4th Edition Available From http://www.hse.gov.uk/pubns/priced/l8.pdf

The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR) require employers and others, e.g. someone who has control of work premises, to report to HSE, accidents and some diseases that arise out of or in connection with work. Cases of legionellosis are reportable under RIDDOR if: a) a doctor notifies the employer; and b) the employee's current job involves work on or near cooling systems which are located in the workplace and use water; or work on water service systems located in the workplace which are likely to be a source of contamination. For more guidance on RIDDOR, see the HSE Website. Those who have, to any extent, control of premises, have a duty under the **Notification of Cooling Towers and Evaporative Condensers Regulations 1992** to notify the local authority in writing with details of 'notifiable devices'. These are cooling towers and evaporative condensers, except when they contain water that is not exposed to the air and the water and electricity supply are not connected. If a tower becomes redundant and decommissioned or dismantled, it should also be notified. Although the requirement is to notify the local authority, the relevant authority (i.e. HSE or the local authority) for the premises concerned enforces the Regulations. Notification forms are available from the local authority or local environmental health department. The main purpose of these Regulations is to help investigate outbreaks.

The Safety Representatives and Safety Committees Regulations 1977 and the **Health and Safety (Consultation with Employees) Regulations 1996** require employers to consult trade union safety representatives, other employee representatives, or employees where there are no representatives, about health and safety matters. This includes changes to work that may affect their health and safety at work, arrangements for getting competent help, information on the risks and controls, and planning of health and safety training.
Similar legislation applies in Northern Ireland, Isle of Man and the Channel Islands.

You can find more on the control of legionella bacteria in water systems at the HSE's website http://www.hse.gov.uk/legionnaires/index.htm

Executive Risk Summary

Risk Criteria	Commentary	Risk Rating
Management: An assessment of Legionella control on site, It is important that those people involved in assessing risk and applying precautions are competent, trained and aware of their responsibilities	The nominated authorities was provided by Believe Housing before the assessment was carried out. Previous assessment was observed for the property in digital logbook. Training records are available on request. Written scheme were also available on digital logbook. Records for water hygiene PPMs were observed onsite and in digital logbook	2
Contamination. An assessment of the risk at source, including assessment of the quality, temperature and integrity of the water supply.	The incoming mains is supplied by mains water. Mains water has a low contamination risk due to legionella entering the building through it, in small quantities. There are flexi hoses located on the water system. There is a blind end located on the water system.	3
Amplification. An assessment of the conditions and whether they are likely to support any Legionella growth, including temperature, water change rate, nutrients, materials of construction and areas where water is not replaced with fresh.	The temperatures were observed to be mostly compliant at the time of the assessment. The only observed stored water is the calorifier, which is a not a significant size. There is a blind end located on the water system. There are flexi hoses located on the water system. The property is used weekly	3
Transmission. An assessment of whether droplets or aerosols are likely to form and spread.	The outlets in the property will create a small aerosol and splash back which could potentially be breathed in.	2
Exposure. An assessment of the risk that droplets or aerosols will be inhaled (or contaminated water aspirated).	If circumstances permit, the users of the outlets may be affected by the produced aerosol	2
Susceptibility of individuals exposed. An assessment of the nature of the exposed population, taking account of their vulnerability to Legionella Infection.	The properties water system will be used by staff, clients and contractors. An average demographic of people will use the water system and it is reasonable to assume that there may be users, that have a higher susceptibility to legionella bacteria and scald risks. There were individuals who are of a more susceptible category to scald risks.	3
Overall Site Risk Summary	The risk given is low. This is due to the relevant size of the water system, consistent water hygiene regime that is in place and the overall compliant temperatures observed at the time of the assessment	2

The overall site risk rating is calculated thus. The highest individual risk rating per criterion is entered against the risk rating column, any criteria that had no hazards loaded against them must therefore be given a low risk rating. The arithmetic mean is then calculated using the following formula:

$$\bar{x} = \frac{1}{n}\left(\sum_{i=n}^{n} a_i\right)$$

Where:

$\bar{x}$ = Arithmetic Mean
n = Number of terms
a_i = the value of each individual term

The overall site risk rating is reported numerically from 1 to 9 as detailed in table 1 and using the same priority action time frame recommendations derived from table 2.

Risk Assessment

Risk Rating System

Definitions

Hazard identification: process of recognizing that a hazard (3.8) exists and defining its characteristics;
Hazard: hazard source, situation, or act with a potential for harm in terms of human injury or ill health or a combination of these;
Risk: combination of the likelihood of an occurrence of a hazardous event or exposure(s) and the severity of injury or ill health that can be caused by the event or exposure(s) This risk scoring system covers;
Risk assessment: process of evaluating the risk(s) arising from a hazard(s), taking into account the adequacy of any existing controls, and deciding whether or not the risk(s) is acceptable

Risk Assessment

This risk scoring system is informed by *'BS 8580-1:2019 Water quality – Risk assessments for Legionella control – Code of practice'*, and HSE Guidance on Risk Management available from their website. During a risk assessment hazard identification will take place and each hazard risk rated evaluating the following parameters:
1. Contamination. An assessment of the risk at source, including assessment of the quality, temperature and integrity of the water supply.
2. Amplification. An assessment of the conditions and whether they are likely to support any Legionella growth, including temperature, water change rate, nutrients, materials of construction and areas where water is not replaced with fresh.
3. Transmission. An assessment of whether droplets or aerosols are likely to form and spread.
4. Exposure. An assessment of the risk that droplets or aerosols will be inhaled (or contaminated water aspirated).
5. Susceptibility of individuals exposed. An assessment of the nature of the exposed population, taking account of their vulnerability to Legionella Infection.

An Explanation of the Risk Rating System

During the risk assessment, individual hazards will be identified and risk rated using the scoring matrix derived from BS 18004 and the HSE website (See Figure 1) this will evaluate per type (contamination, amplification, transmission, exposure and host susceptibility) for individual hazards.

	Potential Severity of the Harm		
Likelihood of Harm Occurring	**Slightly Harmful 1**	**Harmful 2**	**Very Harmful 3**
Highly Unlikely 1	**Trivial 1**	**Tolerable 2**	**Moderate 3**
Unlikely 2	**Tolerable 2**	**Moderate 4**	**Substantial 6**
Likely 3	**Moderate 3**	**Substantial 6**	**Intolerable 9**

[2] HSE (No Date) Frequently asked questions. "What are risk matrices?' Available from:http://www.hse.gov.uk/risk/faq.htm

Rating	Risk	Priority Action Time Frame
1	Trivial (Very Low)	Within 5 Years
2	Tolerable (Low)	Within 1 year
3 - 4	Moderate (Medium)	Within 6 Months
5 to 6	Substantial (High)	Within 1 Month
7 to 9	Intolerable (Very High)	Immediately

Table 2 Priority Action Time Frame

Individual hazards have received a risk score should be managed within that time period. The overall risk rating for the site will be an evaluation of all recorded risks and is communicated in the Risk Summary Page

Are there any known periods of time that this site or parts of this site may become vacant?	Yes - If not booked
Is there an adequate programme of control in place during periods of little use?	Yes - Flushing regime in place

* Timescale that controls should be implemented based on risk and cost or difficulty of corrective action

Potential Hazards	Risk	Control to Mitigate Assessed Risk?	Residual Risk if Control is Implemented?	Timescale*	Image
ID:602570 Flexi hoses present on the water system. They were observed to be WRAS approved but should be removed when not required due to the amplification risk they pose on the water system	Low (2)	Recommend removing flexi hoses when not required, due to their risk on the water system	Very Low (1)	Within 1 Year	 Flexi hoses present on water system - Kitchen
ID:602571 A review of scalding risks should be performed. TMVs should only be used when an individual who has a more susceptibility to scalding, has access to hot water outlets. The TMVs should be on the outlets that these individuals have access to.	Low (2)	Recommend performing a comparative scald to legionella risk assessment. Reviewing the access to outlets by higher risk individuals. If a TMV is not needed then it should be removed	Very Low (1)	Within 1 Year	No Image
ID:602572 Blind end present on the water system. Blind ends should be removed to source branch. Blind ends tend to have trapped sediment, ideal temperatures and stagnant water which are ideal conditions for legionella bacteria proliferation.	Medium (3)	Recommend removing blind end to source branch, leaving no capped pipework behind.	Very Low (1)	Within 6 Months	 MCWS blind end in Gas boiler cupboard
ID:602573 The inlet mains and return pipework for cal 01 are connected together. This results in mixing of water categories and appropriate backflow protection should be installed to reduce the risk of warm waters being present in the associated pipeworks	Medium (3)	Recommend installing appropriate backflow protection for both pipeworks to ensure that any backflow risk are managed accordingly	Very Low (1)	Within 6 Months	 Mains and return pipework joining

Documentation and Records

Period of Time Reviewed for This Assessment?	12 months
Is there an Up-to-date logbook and schematic diagram(s) of the water system(s) to be evaluated?	Yes - digital logbook
Is an asset list available, an asset register that includes all associated plant, pumps, strainers and other relevant items?	Yes - digital logbook
Is the previous risk assessment available for review?	Yes - digital logbook
Date of Previous Assessment?	2nd August 2022
Is there evidence that the findings and required corrective actions from previous risk assessments have been addressed?	Yes - Observed on site
Are records of any logbook checks or audits available?	None observed at the time of the assessment
Evaluation of the current written scheme of control, including:	
Does the scheme have a clearly described management scheme, such as a diagram of management structure showing lines of responsibility, task allocation and communication?	Yes - digital logbook
Are deputies identified to cover for staff sickness/holidays, etc.?	Yes - digital logbook
Are there details of the maintenance history of the water system(s) to be assessed in the logbook?	Yes - digital logbook
Are there training records, and records of competency checks, for on-site personnel?	Available on request, provided period to assessment
Has the health and safety provision for those undertaking the written scheme of control considered both site staff and contractors? And, are appropriate risk assessments and method statements available for inspection? If not raise a hazard.	Yes - digital logbook
Are there monitoring and inspection records for all tasks completed? Tank inspections, temperatures, TMV checks, flushing records etc	Yes - digital logbook and onsite logbook
Do monitoring and inspection records indicate any deviations from acceptable operating conditions?	Hot water temperatures are not always compliant
If applicable are water treatment and service reports available?	Not applicable
Are cleaning and disinfection records available?	Yes - For outlets, digital logbook
Are legionella and other microbial analysis results available?	None observed
Do microbial analysis results indicate that the current Legionella control measures are effective?	Not applicable

Where past issues have been caused by positive identification of Legionella bacteria, have the correct actions been taken within a reasonable time?	Not applicable
Where past issues have been caused by positive identification of Legionella bacteria, have re-samples been collected to ensure control has been regained?	Not applicable
Are thermometers and other site test equipment calibrated regularly, or calibration checked?	No records observed from contractor at the time of the assessment
Are records kept for five years?	Yes

General Asset Register

Incoming Mains Water	1
Private Water Supply	-
Ion Exchange Water Softeners	-
Electromagnetic Water Conditioners	-
Source Water Filter	-
Type of Domestic Water System?	
Open Vented:Gravity Fed with Recirculation	-
Open Vented:Gravity Fed without Recirculation	-
Unvented	1
Boosted Water Supply	-
Cold Water Storage	-
Domestic Hot Water Services	
Calorifiers	1
Water Heaters (more than 15 litres)	-
POU Water Heaters (15 litres and less)	-
Combination Water Heater	-
Combination Boiler	-
Plate Heat Exchangers	-
Hot Water Buffer Store/Tank	-
Expansion Vessels	1
Hydraulic Accumulators	-
Showers	-
Air Humidification	-
Closed System (Heating)	1
Closed System (Chilled)	-

Swimming Pool	-
Spa Pool	-
Other System Assets	-
Miscellaneous	-

Incoming Mains Water - 1

Incoming Water Supply	 Incoming mains
Additional Area Photo for Context (Optional)	 Gas boiler cupboard
Source	Mains Water
Location	Gas boiler cupboard
Diameter	28mm
Is there an isolation valve?	Yes
Does the isolation valve work?	Unknown
Is there some form of Backflow Protection on the Incoming Mains?	None observed
Is there a water meter fitted? If so, please note the consumption figure at the time of the RA.	No

Calorifier and Hot Water Storage - 1

Asset No.	Cal01
Asset Make & Model	Range tribune HE
System type? Open vented or unvented	Unvented
Asset Location	Hallway cupboard
Area Served	All DHWS
Construction Material	Stainless Steel
Size(m): Diameter	-
Size (m): Radius	-
Size (m): Height	-
Capacity (L)	120
Flow pipework size in mm?	22mm
Return pipework size in mm?	22mm
Period Of Operation	Constant
Heating Method	In-Direct
Drain Valve	Yes
Drain Operation	Not tested
Inspection Hatch	No
Does the domestic hot water flow have a circulation pump installed?	No
Is this domestic hot water system circulated?	Yes
Calorifier Insulation	Good
Pipework Labels	Good
Set Temperature (C)	Unknown
Stored Temperature (C)	57.8
Are there temperature gauges on flow and return pipework?	Yes - remote temperature monitoring
Flow Temperature (C)	57.8

Return Temperature (C)	55.7
Floor Drain	No
Nearest Power Point	<5m
Is there a solar pre-heat coil at the base of the vessel?	No
Times where there is little heat gain from the solar panels, is the entirety of the vessel heated to 60 Deg C for at least 1 hour a day?	Not applicable
Is stratification risk present?	Unlikely due to size
If installed, what are the anti-strafication system operation settings?	Not applicable
If installed, is the anti-stratification system operating as designed?	Not applicable
Fed from (MCWS/BCWS/CWST)	MCWS
Extra Information	-
HWS Vessel Photograph	 Cal 01
Return Pump	 Return

Hydraulic Accumulators and Expansion Vessels - 1

Asset No. (EV)	EV01
Asset Make	Varem
Asset Model	Extravarem
Asset Location	Hallway cupboard
Expansion Vessel Type	Bladder
External Condition	Good
Fed from (MCWS/BCWS/CWST)	MCWS
Pipework Diameter	22mm
Volume (L)	3
Is the vessel pressurised?	Yes
Is it practical to flush the expansion vessel?	Yes
Is the vessel installed correctly?	Yes
Is the vessel the correct size and type?	Unknown
Appearance of drain water	Not tested
Are Documented Maintenance Records Available?	Yes
Extra Information	-
Expansion Vessel Photograph	 EV01

Thermostatic Mixing Valves And Thermostatic Mixing Taps - 1

Location?	Kitchen
Location Image:	 Kitchen
Number of TMVs in this Location?	1
Has the installation of the TMV been informed by a comparative assessment of scalding risk versus the risk of infection from legionella?	None observed
In terms of scalding is the area used by a recognised and identified risk group in terms of scalding? (very young, very elderly, infirm or significantly mentally or physically disabled people or those with sensory loss)	Elderly
Could the TMV(s) be removed without increasing the scald risk?	Scald risk assessment would need to be carried out
Type of TMV?	TMV 2/3
How many outlets does the TMV serve?	1
Is the TMV incorporated into the outlet (TMT)?	None observed
What length of pipework is there post TMV?	0.6m
TMV Pipework Size	Copper
Is there both a hot and a cold water outlet post-TMV, rendering the cold outlet as a little-used-outlet?	Yes
Do the outlet(s) served house a flow restrictor, flow straightener, aerator or similar device?	Yes
Is/are the TMV(s) accessible for routine maintenance?	Yes
Is there a documented maintenance regime in place?	Yes
Are isolation valves installed on the CWS and HWS to the TMV?	On HWS & CWS

Thermostatic Mixing Valve:

TMV

Thermostatic Mixing Valves And Thermostatic Mixing Taps - 2

Location?	Male toilet
Location Image:	 Male toilet
Number of TMVs in this Location?	2
Has the installation of the TMV been informed by a comparative assessment of scalding risk versus the risk of infection from legionella?	None observed
In terms of scalding is the area used by a recognised and identified risk group in terms of scalding? (very young, very elderly, infirm or significantly mentally or physically disabled people or those with sensory loss)	Elderly
Could the TMV(s) be removed without increasing the scald risk?	Scald risk assessment would need to be carried out
Type of TMV?	TMV3
How many outlets does the TMV serve?	1 Per TMV
Is the TMV incorporated into the outlet (TMT)?	None observed
What length of pipework is there post TMV?	0.15m
TMV Pipework Size	Copper
Is there both a hot and a cold water outlet post-TMV, rendering the cold outlet as a little-used-outlet?	Yes
Do the outlet(s) served house a flow restrictor, flow straightener, aerator or similar device?	No
Is/are the TMV(s) accessible for routine maintenance?	Yes
Is there a documented maintenance regime in place?	Yes
Are isolation valves installed on the CWS and HWS to the TMV?	On HWS & CWS

Thermostatic Mixing Valve:

TMV

Thermostatic Mixing Valves And Thermostatic Mixing Taps - 3

Location?	Male toilet
Location Image:	 Male toilet
Number of TMVs in this Location?	2
Has the installation of the TMV been informed by a comparative assessment of scalding risk versus the risk of infection from legionella?	None observed
In terms of scalding is the area used by a recognised and identified risk group in terms of scalding? (very young, very elderly, infirm or significantly mentally or physically disabled people or those with sensory loss)	Elderly
Could the TMV(s) be removed without increasing the scald risk?	Scald risk assessment would need to be carried out
Type of TMV?	TMV3
How many outlets does the TMV serve?	1 Per TMV
Is the TMV incorporated into the outlet (TMT)?	None observed
What length of pipework is there post TMV?	0.4m
TMV Pipework Size	Copper
Is there both a hot and a cold water outlet post-TMV, rendering the cold outlet as a little-used-outlet?	Yes
Do the outlet(s) served house a flow restrictor, flow straightener, aerator or similar device?	Yes
Is/are the TMV(s) accessible for routine maintenance?	Yes
Is there a documented maintenance regime in place?	Yes
Are isolation valves installed on the CWS and HWS to the TMV?	On HWS & CWS

Thermostatic Mixing Valve:

TMV

Outlet Asset Register

Shower Heads/Spray Outlets	
Hot & Cold Mixed Showers	-
Electric Showers	-
Emergency Showers	-
Plate Wash Heads	-
Spray Outlets (Excl. Showers)	-
Thermostatic Mixing Valves / Mixing Devices	
TMV Type 2	-
TMV Type 3	5
Thermostatic Shower Mixers	-
Non-Thermostatic Shower Mixers	-
Thermostatic Mixing Taps	-
Mixer Taps (Non-Thermostatic)	-
TMVs Not Accessible	-
Water Outlets	
Domestic Hot Water Outlets	5
Domestic Cold Water Outlets	4
Drinking Water Outlets	1
Miscellaneous	
Drinking Water Chillers	-
Washing Machines	-
Dishwashers	-
Beverage Boilers	-
Steam Ovens	-
Potato Peelers	-

In-line Cartridge Water Filters	-
In-line Cartridge Water Conditioners	-
Outside taps and services	-
Others	-

Thermometer Used to Complete RA

Thermometer SMSE Asset ID No.	SMSE02489/4
Date Last Calibrated	29/02/2024
Is there a sticker indicating the next calibration date on the thermometer?	Yes
Next calibration due on	31/08/2024
Unique ID of the Timing Device during the assessment?	iPad timer

Temperatures - 1

Outlet Location	Mixed?	Cold Temp	Hot Temp	Mix Temp	MCWS/ CWST Fed	Sentinel Outlet?	Spray Tap? Flexi Hose	Compliant?
Kitchen	TMV	14.4	53.8	43.2	MCWS	Both	Flexi Hose	Yes

Temperatures - 2

Outlet Location	Mixed?	Cold Temp	Hot Temp	Mix Temp	MCWS/ CWST Fed	Sentinel Outlet?	Spray Tap? Flexi Hose	Compliant?
Male toilet	TMV	14.7	53.8	39.6	MCWS	-	Flexi Hose	Yes

Temperatures - 3

Outlet Location	Mixed?	Cold Temp	Hot Temp	Mix Temp	MCWS/ CWST Fed	Sentinel Outlet?	Spray Tap? Flexi Hose	Compliant?
Female toilet	TMV	14.8	53.8	42.1	MCWS	Both	Flexi Hose	Yes

*TMVs are installed to prevent scalding to users on Health & Safety grounds. Due to the blended hot water temperatures they produce they are non compliant in respect of Legionella control. Where TMVs have a comprehensive maintenance programme in place the potential risk is lowered but not removed.

Hot Water: Stored water 60°C. Distribution >50°C within 1 minute of running

Healthcare Hot Water: Stored water 60°C. Distribution >50°C within 30 seconds and >55°C within 1 minute of running

Cold Water: Stored water <20°C. Distribution <20°C within 2 minutes of running

Blind Ends and Dead Legs - 1

Blind End/Dead Leg Photograph	 Blind end
Is this a Blind End or Dead Leg?	Blind End
Location	Gas boiler cupboard
Which supply pipework is the dead/blind end on?	MCWS
Diameter	15mm
Length (M)	0.4m
Pipework Material	Copper
What further action is required to manage the risk of Legionella amplification this dead/blind end poses?	Remove from the system entirely

Closed Water Systems

Heating System?	Yes - Central domestic heating system (Cat 3)
Heat Reclaim System?	-
Chilled Water System?	-
Solar Pre-Heat System?	-
Other:	-
Notes and Observations:	-

These system listed above are all closed systems and therefore present no risk under normal operation. Some consideration should be given to the risks associated with all parts of the system under all reasonably foreseeable operating conditions. For example, a heating system may operate above the temperature range at which legionella bacteria can survive and is fully enclosed. However: - the feed and expansion cistern could easily contain warm water, as could any part of the system where there is no recirculation, in each case providing conditions suitable for legionella bacteria to multiply and will be detailed in this assessment if applicable; - maintenance work such as draining water for chemical testing or dosing, or even air venting radiators, could create contaminated aerosols and contractors should be made aware of this and complete a work specific risk assessment and provide appropriate controls before undertaking any work Only once these considerations are taken into account should these systems present a negligible risk.

Sampling Requirements

Is there a Legionella (LP) sampling regime in place on site?	No
Legionella sampling Visit frequency	-
Legionella sampling number per visit	-
Details Of Specific Locations	-
Is there a Total Viable Count (TVC) sampling regime in place on site?	No
TVC sampling Visit frequency	-
TVC sampling number (per visit)	-
Details Of Specific Locations	-
Is there any other form of sampling being carried out on site?	No
Other sampling frequency	-
Other sampling number	-
Details Of Specific Locations	-
Is there a need to implement any additional sampling?	No
Additional sampling frequency	-
Additional sampling numbers	-
Details Of Specific Locations	-
Justification For Proposed Sampling Regime / Amendments	Due to risk not being high enough to justify
Have You Detailed This Sampling In The Written Scheme Of Control?	NA
Reactive sampling specifically for the presence of Legionella bacteria must also be undertaken at any time that the implemented control measures appear to be failing.	

Review of Written Scheme to Control Legionella Risk

Control Type	Frequency / Allocation
All Systems: Risk Assessment or Risk Review and Reassessment (2-yearly or when there is a reason to suspect it is no longer valid.)	
Responsibility Allocation	SMS Environmental Ltd
Current Legionella risk assessment review frequency	2 yearly
Is the current risk assessment review period considered as being adequate for this building/system?	Yes
What is the recommended risk based review frequency (if different from the current review period)?	-
The recommendation is being made to alter the current risk assessment review period due to the following factors	-
Log Book Audit. Complete a check of the log book to ensure that all tasks detailed in the written scheme are being properly completed by competent and trained individual and appropriate records made, either in hard or electronic records.	
Responsibility Allocation	Believe housing
Current Frequency	Annually
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Check the training and competence of all individuals who have responsibility for undertaking tasks and delivering the written scheme.	
Responsibility Allocation	Believe housing
Current Frequency	Annually
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Calorifier: Inspect calorifier internally by removing the inspection hatch or using a borescope 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. (Annually, or as indicated by the rate of fouling)	
Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Calorifier: 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 (Annually, but may be increased as indicated by the risk assessment or result of inspection findings)	
Responsibility Allocation	HSL Compliance Ltd
Current Frequency	Annually
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Calorifier: 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). (Monthly)	
Responsibility Allocation	HSL Compliance Ltd
Current Frequency	Monthly

Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
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 (55 °C in healthcare premises) Monthly	
Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Hot water services: 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 (Monthly)	
Responsibility Allocation	HSL Compliance Ltd
Current Frequency	Monthly
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Hot water services: 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 to create a temperature profile of the whole system over a defined time period (Representative selection of other sentinel outlets considered on a rotational basis to ensure the whole system is reaching satisfactory temperatures for legionella control)	
Responsibility Allocation	HSL Compliance Ltd
Current Frequency	Monthly
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
POU water heaters (no greater than 15 litres): Check water temperatures to confirm the heater operates at 50–60 °C or check the installation has a high turnover (Monthly–six monthly, or as indicated by the risk assessment)	
Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Combination water heaters: 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. (Annually)	
Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Combination water heaters: Check water temperatures at an outlet to confirm the heater operates at 50–60 °C. (Monthly)	
Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Cold water services: Inspect cold water storage tanks and carry out remedial work, including disinfection, where necessary (Annually)	

Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Cold water services: 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. (Annually - Summer) or as indicated by the temperature profiling)	
Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Cold water services: 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 (Monthly)	
Responsibility Allocation	HSL Compliance Ltd
Current Frequency	Monthly
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Cold water services: 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. (Representative selection of other sentinel outlets considered on a rotational basis to ensure the whole system is reaching satisfactory temperatures for legionella control)	
Responsibility Allocation	HSL Compliance Ltd
Current Frequency	Monthly
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Cold water services: Check thermal insulation to ensure it is intact and consider weatherproofing where components are exposed to the outdoor environment (Annually)	
Responsibility Allocation	Believe housing
Current Frequency	Unable To Confirm
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	Annually
All Domestic hot and cold water services: Check all hot and cold water outlets for scale and biofilm build-up and if found to be contaminated clean, descale and disinfect.	
Responsibility Allocation	Believe housing
Current Frequency	Unable To Confirm
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	Quarterly
All Domestic hot and cold water services: If flow straighteners or tap inserts are fitted to any water outlet, these should be removed and cleaned descaled and disinfected or replaced as necessary.	
Responsibility Allocation	Believe housing
Current Frequency	Unable To Confirm

Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	Quarterly
Showers and spray taps: Dismantle, clean and descale removable parts, heads, inserts and hoses where fitted (Quarterly or as indicated by the rate of fouling or other risk factors.)	
Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Thermometer: Uniquely identify instrument and calibration check against ice-point and boiling point standards in line with a written procedure (6-monthly)	
Responsibility Allocation	HSL Compliance Ltd
Current Frequency	Unable To Confirm
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	6 Monthly
POU filters: 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). (According to manufacturer's guidelines)	
Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Chilled Water Dispenser: Change Carbon Filter and disinfect entire unit including supply pipework. (6-Monthly)	
Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Base Exchange Softener: Visually check the salt levels and top up salt, if required. Undertake a hardness check to confirm operation of the softener (Weekly)	
Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Base Exchange Softener: Service and Disinfect (Annually)	
Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Infrequently used equipment within a water system (i.e not used for a period equal to or greater than seven days) should be included in 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.	

Responsibility Allocation	Contego
Current Frequency	Weekly
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
TMVs: 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. (Annually)	
Responsibility Allocation	HSL Compliance Ltd
Current Frequency	Annually
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Expansion vessels: 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 (6-Monthly)	
Responsibility Allocation	HSL Compliance Ltd
Current Frequency	6 Monthly
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Water Connections to Outside Services: Checking the existence of all water connections to outside services; kitchens, fire hydrants and chemical wash units. Any insulation should be checked to ensure that it remains intact. Any water outlets that are no longer used should be removed (Annually)	
Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Legionella Sampling: Sample from systems identified in the risk assessment. (As detailed in the risk assessment)	
Responsibility Allocation	-
Current frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
TVC: Sample from system identified in the risk assessment. (As detailed in the risk assessment)	
Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Closed Water Systems: When testing, maintaining or operating low risk systems, such as fire systems, heating and chilled water systems, etc. Complete a task specific risk assessment and instigate a safe system of work that prevents the generation of a breathable aerosol that will expose operatives to viable legionella bacteria	
Responsibility Allocation	Believe housing
Current Frequency	Annually
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-

Chlorine Dioxide Dosing – Check the system operation and chemical stocks in the reservoir. (Weekly)	
Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Chlorine Dioxide Dosing – Test the treated water for both chlorine dioxide and total oxidant/chlorite at an outlet close to the point of injection to verify the dosage rate and conversion yield. (Monthly)	
Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Chlorine Dioxide Dosing – Measure the concentration of chlorine dioxide at sentinel taps – the concentration should be at least 0.1 mg/l; and adjust the chlorine dioxide dosage to establish the required residual at the sentinel sample points. (Monthly)	
Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Chlorine Dioxide Dosing – Test the chlorine dioxide and total oxidant/chlorite concentration at a representative selection of outlets throughout the distribution system - the concentration should be at least 0.1 mg/l chlorine dioxide. (Annually)	
Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Copper & Silver Ionisation – Check rate and release of copper and silver ions in the water supply. (Weekly)	
Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Copper & Silver Ionisation – Check copper and silver ion concentrations at sentinel outlets. (Monthly)	
Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Copper & Silver Ionisation – Check the measurement of copper and silver ion concentrations at representative taps selected on a rotational basis each year. (Annually)	
Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Copper & Silver Ionisation – Check the condition and cleanliness of the electrodes and the pH of the water supply. (Annually)	

Responsibility Allocation	-
Current Frequency	-
Recommended frequency (where the action needs to be newly implemented, or where the current frequency has been appraised as insufficient)	-
Notes or Observations	-

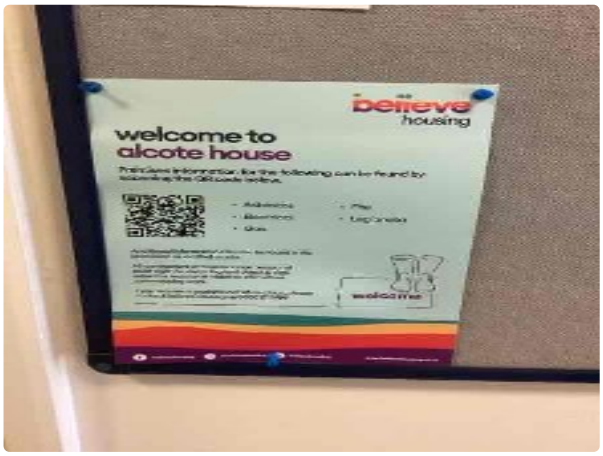
BS8580-1:2019 9.3 Control Measures Page 17 states: The Risk assessment should not involve the preparation of the written scheme of control but rather provide information that is critical to its preparation, improvement and review. Note 2 Ensuring that there is a written scheme of control is a legal requirement of the duty holder although they might instruct the risk assessor to advise or prepare the scheme of control on their behalf as a separate commission.

Schematic Drawing

Please detail as much information as possible: Sentinel Outlets, Primary and Secondary Flow and Return Loops, Materials, Size, Location, Valves etc	
This is a new site and requires a new schematic	Yes
Changes to existing schematic (sent as a separate AutoCad file)	No
No Changes - Insert Job No. of last schematic	-
ENSURE ALL SENTINEL OUTLETS ARE MARKED ON THE SCHEMATIC	

Images

Disconnected water heater



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