

Legionella Risk Assessment

Sports Pavillion



Building name	Sports Pavillion
Address	The Moor, Melbourn, Cambridge SG8 6DZ
Client	Sports Pavillion
Issue date report	18-08-2026
Recommended review date	24-07-2028

Preamble

The aim of this assessment is to determine the likelihood of growth of (and exposure to) Legionella bacteria in your building's water system. Based on this assessment, we then provide recommendations and measures to help you manage and control any risks and minimise the chance of infection.

Client

Name	Sports Pavillion
Address	The Moor, Melbourn, Cambridge SG8 6DZ
Contact person	
Phone	
Email	

Consultancy company

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Report reviewed by	4i Water Services Compliance

Compliance

We performed this assessment in compliance with the following guidance and standards:

- Approved Code of Practice L8
- Health and Safety Guidance 274 part 2
- British Standard 8580-1 2019
- Health Technical Memorandum 04-01

About the survey

Date of survey	24-07-2026
Report issue date	18-08-2026
Thermometer	D21390289

Remark	This Legionella risk assessment was undertaken on behalf of the Parish council to conduct a comprehensive review of the water systems present on site. The purpose of the assessment was to identify and evaluate any conditions that may give rise to the proliferation of Legionella bacteria, including system design, water storage, temperature control, and usage patterns.
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1 Introduction

Legionella and the importance of prevention

Legionella bacteria are organisms that live in freshwater and drinking water supplies. Someone infected with the bacteria may show any one of several symptoms, each one of which can be fatal. Mere contact with the bacteria isn't enough to become sick. It's only possible to become infected by inhaling the bacteria as a fine water mist, for example as droplets or an aerosol. The intensity of exposure also plays a role, as do the concentration levels of the bacteria in the water inhaled and the ability of our body's immune system to combat initial infection.

Legionella bacteria can only grow to dangerous concentration levels at temperatures between 20 °C and 50 °C. The risk increased when water has been stagnant for an extended period, for example in infrequently used taps or showerheads. Higher temperatures start to kill the bacteria – rather slowly above 50 °C, but more rapidly above 60 °C.

Dozens of people die from Legionella infections every year and a far larger number suffer from ongoing health problems following treatment, for example poor concentration, fatigue and loss of strength. Quite often, these symptoms also lead to a partial or total incapacity to work. This is why tap water systems intended for certain purposes are subject to regulations. These regulations aim to prevent Legionella outbreaks and form the basis for this report.

About the report

This report is a legionella risk assessment for the hot and cold water distribution systems. It provides an overview of the actions that need to be taken to reduce the risk of growth of and exposure to the legionella bacteria as much as possible. In chapter 2, the summary, a risk score for the site is presented. In the chapters and appendices after that, the risk analysis and sources of information can be found. In chapter 4, the technical recommendations are described in more detail.

The reason for assessment

Routine

2 Executive Summary

2.1 Summary

The following limitations were identified during this assessment review. Overall, the water system has been assessed as medium risk in relation to the potential proliferation of waterborne bacteria, particularly Legionnaires' disease. This classification has been assigned due to the following factors:

- * Dead legs were identified within the water system.
- * Flexible hoses were observed on multiple outlets.
- * Scale was present on a majority of outlets as well as shower heads and hoses.
- * Insufficient insulation was identified on sections of the pipework during the inspection.
- * Recommend HWSV 01 and 02 have de stratification pumps installed for reduce areas of stagnant or cooler water and minimise the potential for localised temperature loss and conditions that could support bacterial growth.

Below you can find the total inherent risk (calculated in 2.2) and the Total Residual Risk, after all the technical recommendations or control measures are in place.

Risk	Risk Score
Total Inherent Risk	C
Total Residual Risk	B
As low as reasonably practicable	B

Risk Score	Risk Score Definition
A	Very Low Risk
B	Low Risk
C	Medium Risk
D	High Risk
E	Very High Risk

Limitations

While every effort is made to deliver a comprehensive and accurate risk assessment and report, the findings are inherently limited to what can be visually inspected and the information provided by the client at the time of the assessment. As the survey is non intrusive in nature, it may not fully identify or assess risks associated with assets or pipework that are inaccessible or obstructed.

Out of scope

There are no areas of concern identified that fall outside the scope of assessment.

2.2 Site risk score and review frequency

As described in the British Standard 8580-1:2019 chapter 8.2, there is a chain of events leading to the infection of a human by Legionella, which should be considered in any risk assessment process. Those 5 (CATES) risks are graded below to determine the risk for this site and the advised frequency for reviewing your risk assessment. Each factor is evaluated and assigned a score based on the conditions observed during the assessment and the information available regarding the management of the water systems. The combined scores provide an indication of the inherent risk, residual risk, and the target risk level (ALARP).

Definitions aligning with British Standard 8580-1:2019 chapter 8.2, HSG274 Part 2, ACoP L8 and LCA guidance below:

Contamination (A): An assessment of the risk of Legionella contamination entering the system at source, including consideration of the quality, temperature and integrity of the incoming water supply and system components.

Amplification (B): An evaluation of the conditions that may support the growth of Legionella bacteria, including water temperature, stagnation, turnover rates, nutrient availability, construction materials and system design. The effectiveness of management arrangements, maintenance regimes and documentation, as recommended within HSG274, is also considered, as inadequate control of these factors may increase the potential for bacterial proliferation.

Transmission (C): An assessment of the potential for droplets or aerosols to be generated and dispersed from the water system, particularly from outlets or equipment capable of producing respirable droplets.

Exposure (D): An assessment of the likelihood that individuals may inhale aerosols or aspirate contaminated water, considering how the system is used and the proximity of users to potential aerosol sources.

Susceptibility of Individuals Exposed (E): An assessment of the characteristics of the population using the premises, including their potential vulnerability to Legionella infection. This may include employees, contractors, visitors and members of the public. Particular consideration is given to whether susceptible persons may reasonably be expected to be present, as outlined within ACoP L8 and HSG274 guidance. The responsible person should ensure that any risks associated with vulnerable individuals are addressed within the Written Scheme of Control.

Total Inherent Risk: The inherent risk score represents the underlying level of risk associated with the water systems in the absence of effective control measures, or if those controls were to fail.

Residual Risk Score: The residual risk score represents the level of risk observed at the time of the assessment, taking into account the existing control measures, management arrangements and maintenance procedures currently in place. Residual risk may be further reduced through the implementation of the recommendations provided within this report.

ALARP (As Low As Reasonably Practicable): Reflects the duty under health and safety legislation to reduce risk so far as is reasonably practicable. The ALARP risk score represents the level of risk that should be achievable once the recommended control measures are implemented. The recommendations within this assessment are intended to bridge the gap between the current residual risk and the ALARP target level.

Risk Factor	Risk Score
Contamination (A) The overall contamination risk is rated as a low. 1 - The majority of site's cold water services are supplied directly from the local mains water supply. This means that cold water services are fed into the building without the use of intermediate storage tanks on site, providing a continuous supply of fresh water from the external distribution network. 2 - HWSV 01 and HWSV 02 are located within the ground floor kitchenette store cupboard. During the assessment, It is recommended that a suitable de-stratification pump is considered for installation on each cylinder to promote effective circulation of the stored water, reduce areas of stagnant or cooler water and minimise the potential for localised temperature loss and conditions that could support bacterial growth. Any proposed modifications should be assessed and installed by a suitably qualified person, with the system subsequently monitored to confirm that appropriate temperatures are being maintained.	B
Amplification (B) 1 - Moderate to heavy limescale deposits were noted on numerous outlets across most buildings. Scale can compromise water hygiene by creating rough surfaces that allow bacteria, including Legionella, to harbour and multiply. It may also reduce the effectiveness of temperature control and impair the performance of taps, showers, and associated fittings. Recommend implementing a clean, disinfection and descale regime on all outlets where scale has accumulated. 2 - Dead legs identified within the water system should be removed wherever reasonably practicable. Dead legs defined as lengths of pipework with little or no water flow can allow water to stagnate, creating favourable conditions for the proliferation of Legionella bacteria. Recommend that all lengths of redundant pipework are cut back as reasonably practicable as close to the live source, capped or pieced through. Where removal is not immediately feasible, appropriate mitigation measures should be implemented. 3 - Flexible hoses were observed on site. While they are often installed for convenience, flexible hoses pose a higher risk compared with fixed pipework. In accordance with the Health and Safety Executive's (HSE) Approved Code of Practice L8 and guidance in HSG274 Part 2, the use of flexible hoses should be minimised, as they are known to promote bacterial colonisation within water systems. To reduce risk and align with best practice, it is recommended that all existing flexible hoses be replaced with fixed hard copper pipework. 4 - Areas of the mains pipework were observed to be exposed. Recommend that suitable thermal insulation is installed on all exposed pipework to reduce thermal loss and unwanted transfer.	C
Transmission (C) The risk of transmission on site is considered high due to the number of showers available. These water systems can create aerosols and, if not properly maintained and controlled, may increase the potential for the spread of waterborne bacteria. As a result, effective monitoring, maintenance and water management procedures are essential to minimise the risk of transmission.	D
Exposure (D) The potential for exposure is considered high due to the presence of numerous showers located throughout the site. Showers are recognised as significant aerosol-generating outlets, capable of producing fine water droplets that may be inhaled by building occupants. If Legionella bacteria are present within the water system, these aerosols can present an increased risk of exposure.	D
Susceptibility of individuals exposed (E) The susceptibility of individuals who may be exposed within the premises during this survey was assessed as presenting a medium level of risk. This assessment takes into account the general nature of building occupancy and the typical profile	C

of users who may come into contact with the water systems. A medium risk rating generally indicates that, while the population is not considered highly vulnerable (such as in hospitals or care environments), there is still a reasonable likelihood that individuals of varying ages and health conditions may be exposed. This could include office staff, visitors, and contractors who may have differing levels of susceptibility to waterborne bacteria, including Legionella.	
Total Inherent Risk Medium risk refers to the overall level of risk associated with the water system before any control measures or mitigations are applied. This rating indicates that the system has minimal factors that could support the growth or spread of Legionella bacteria. Contributing factors may include frequent water use, good turnover, maintained temperatures, and well maintained system components. A low risk rating suggests that the potential for exposure is minimal; however, routine monitoring, maintenance, and adherence to the Written Scheme of Control should still be maintained to ensure the water system remains safe and compliant with ACoP L8 guidance.	C
Residual Risk Score The residual risk score is classified as low and represents the level of risk remaining after all recommended control measures and mitigations have been implemented. This indicates that, following actions such as routine monitoring, maintenance, flushing, temperature control, descaling, and removal of higher risk components, the likelihood of Legionella growth and exposure has been significantly reduced. While the residual risk is low, ongoing adherence to the site's Written Scheme of Control, regular inspections, and record keeping are essential to maintain safe water system operation and ensure continued compliance with ACoP L8 guidance.	B
As low as reasonably practicable Full implementation of the recommended actions in this assessment will substantially reduce the overall risk of Legionella. These measures target existing deficiencies, enhance system performance, and ensure compliance with relevant health and safety standards, including ACoP L8 and HSG274. Continued maintenance, monitoring, and periodic reviews will help maintain effective long term control of Legionella within the water system.	B

Review Frequency

According to BSI chapter 10 e, there are different reasons for regularly reviewing the risk assessment. Most of them include major changes to the situation since it was first assessed, including: change of staff or contractors, changes in the water system, indication of ineffective control measures, and so forth. We advise to review the risk assessment after the recommended remedial actions and technical recommendations have been performed. When any of these instances occur, please notify us directly to plan a risk assessment review.

The total inherent risk score of a site is also an important driver of the regular review frequency. Below, you can find our advised review recommendations, that you can match to your total risk score.

Risk Score	Risk Score Definition	Review Frequency
A	Very Low Risk	5 years
B	Low Risk	3 years
C	Medium Risk	2 years
D	High Risk	1 year
E	Very High Risk	< 1 year

2.3 System risk

The total system risk is based on all the available assets and remedial actions attached to them. When for example a high-risk remedial action is resolved, the total risk of the system will decrease when there are no other high-risk actions related to the system.

Asset Type	Number of recommendations		
	Low Risk	Medium Risk	High Risk
Calorifier		3	2
Shower		8	1
Washbasin		2	10
Toilet			6

Below, you can find the risk, grouped by the relevant system the risk is related to. This risk is based on the related recommendations.

System Type	Number of Assets	Risk Rating
Mains	1	Low
Hot water storage (incl heaters) and expansion vessels	3	High
Hot & cold water distribution	30	High
Management and Control	n/a	Medium

Management and control risk

The management and control risk has been assessed as medium.

Based on the findings of the Legionella risk assessment. This rating reflects that while some appropriate control measures may be in place, there are gaps or inconsistencies in the supporting records, monitoring, or maintenance activities that could reduce the overall effectiveness of the water system management regime. Continued attention is required to ensure that all control measures are consistently implemented, adequately recorded, and regularly reviewed in line with current Legionella guidance and best practice.

Technical recommendations

The table below lists the number of recommended system modifications. The chapter on recommendations discusses them in more detail.

Priority of recommendations	Number of recommendations
High priority	19
Medium priority	13
Low priority	0

2.4 System description

Site description

Site details	
Building use	Spots Pavilion
Usage pattern	The site is used regularly throughout the year, with increased occupancy and usage during the football season when the facilities are typically used approximately three to four days per week. In addition to football related activities, the site is available for private hire throughout the year, resulting in regular use of the building and its associated water outlets. During school term time, the premises are also used during the evenings for children's groups, including Cubs and Beavers. These varied patterns of occupancy and use have been considered when assessing the frequency of water outlet usage and the potential for periods of reduced demand within the water system.
Number of occupants	Around 35
Susceptibility of occupants	1 to 65+years of age
Description of water systems	
Construction year of water systems	Around 2000
Last adjustment of water systems	Around 2023

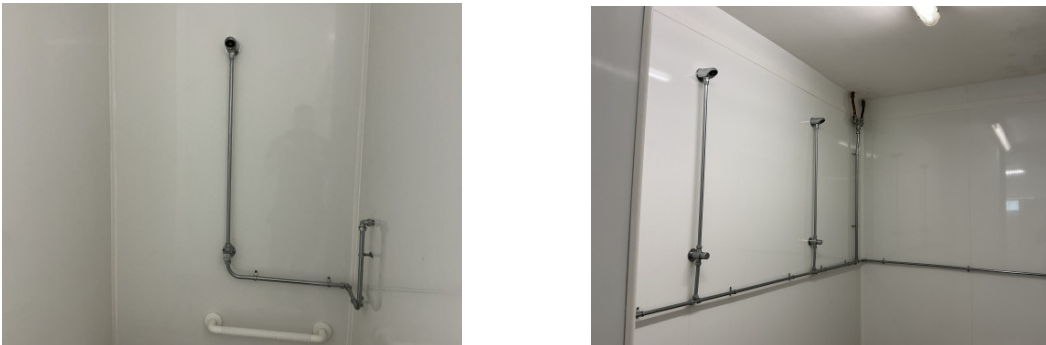
3 Technical Recommendations

Our assessment has identified several issues that will likely result in the growth of (and exposure to) Legionella bacteria in your building's water system. You'll need to make several system modifications to minimise or eliminate this risk entirely. This section discusses our recommendations. We've prioritised the modifications based on the underlying risk level. It isn't possible to eliminate every problem simply by modifying a system, therefore you'll also need to take additional control measures.

3.1 High priority

P1 - High priority – To be completed as soon as reasonably practicable. These are urgent and important actions and directly related to a loss of control and exposure to unacceptable levels of risk.

Description	Performed by / date
#2: Toilet - Location: Away team changing room, Floor: Ground floor, id: 1-597-154 Hazard description: Flexible hoses have been identified on the pipework feeding the outlets. Recommendation: Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible. 	
#3: Washbasin - Location: Away team changing room, Floor: Ground floor, id: 1-597-153 Hazard description: Flexible hoses have been identified on the pipework feeding the outlets. Recommendation: Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible. 	

Description	Performed by / date
#4: Washbasin - Location: Away team changing room, Floor: Ground floor, id: 1-597-156 Hazard description: Scale was observed being present on the outlet(s). Recommendation: It is recommended that all outlets, showerheads & flexi hoses, and spray taps (where applicable) are descaled, cleaned and disinfected (at least) on a quarterly basis to remove scale and/or debris. Outlets & showerhead descaling, cleaning & disinfection should be recorded in the Water Management Logbook. 	
#4: Washbasin - Location: Away team changing room, Floor: Ground floor, id: 1-597-157 Hazard description: Flexible hoses have been identified on the pipework feeding the outlets. Recommendation: Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible. 	
#9: Shower - Location: Away team changing room, Floor: Ground floor, id: 1-597-164 Hazard description: It was noted during the survey that the distance of the TMV from the outlets it serves was not within the recommended guidelines (i.e. >2.5m). Recommendation: It is recommended that the TMV is repositioned near (<2.5m) the outlet as per HTM guidelines. 	

Description	Performed by / date
#10: Washbasin - Location: Female Wc, Floor: Ground floor, id: 1-597-170 Hazard description: Flexible hoses have been identified on the pipework feeding the outlets. Recommendation: Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible. 	
#12: Toilet - Location: Female Wc, Floor: Ground floor, id: 1-597-168 Hazard description: Flexible hoses have been identified on the pipework feeding the outlets. Recommendation: Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible. 	
#13: Toilet - Location: Female Wc, Floor: Ground floor, id: 1-597-166 Hazard description: Flexible hoses have been identified on the pipework feeding the outlets. Recommendation: Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible. 	

Description	Performed by / date
#14: Toilet - Location: Female Wc, Floor: Ground floor, id: 1-597-173 Hazard description: Flexible hoses have been identified on the pipework feeding the outlets. Recommendation: Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible. 	
#18: Calorifier - Location: Kitchenette cupboard, Floor: Ground floor, id: 1-597-172 Hazard description: It was noted during the survey that the calorifier cylinder had no destratification pump installed. Recommendation: It is recommended that a destratification pump is installed to ensure uniform temperature within the cylinder. 	
#19: Calorifier - Location: Kitchenette cupboard, Floor: Ground floor, id: 1-597-176 Hazard description: It was noted during the survey that the calorifier cylinder had no destratification pump installed. Recommendation: It is recommended that a destratification pump is installed to ensure uniform temperature within the cylinder. 	

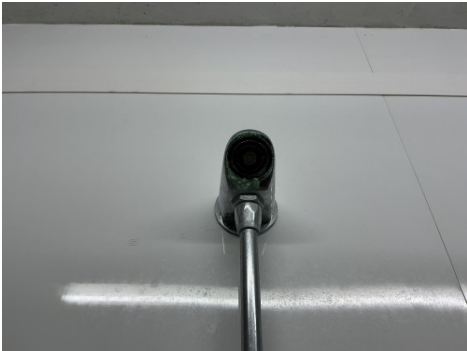
Description	Performed by / date
#21: Washbasin - Location: Home team changing room, Floor: Ground floor, id: 1-597-179 Hazard description: Flexible hoses have been identified on the pipework feeding the outlets. Recommendation: Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible. 	
#21: Washbasin - Location: Home team changing room, Floor: Ground floor, id: 1-597-178 Hazard description: It was noted during the survey that the distance of the TMV from the outlets it serves was not within the recommended guidelines (i.e. >2.5m). Recommendation: It is recommended that the TMV is repositioned near (<2.5m) the outlet as per HTM guidelines. 	
#22: Washbasin - Location: Home team changing room, Floor: Ground floor, id: 1-597-177 Hazard description: Flexible hoses have been identified on the pipework feeding the outlets. Recommendation: Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible. 	

Description	Performed by / date
#29: Toilet - Location: Male Wc, Floor: Ground floor, id: 1-597-185 Hazard description: Flexible hoses have been identified on the pipework feeding the outlets. Recommendation: Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible. 	
#30: Washbasin - Location: Male Wc, Floor: Ground floor, id: 1-597-184 Hazard description: It was noted during the survey that the distance of the TMV from the outlets it serves was not within the recommended guidelines (i.e. >2.5m). Recommendation: It is recommended that the TMV is repositioned near (<2.5m) the outlet as per HTM guidelines. 	
#30: Washbasin - Location: Male Wc, Floor: Ground floor, id: 1-597-183 Hazard description: It was noted during the survey that the distance of the TMV from the outlets it serves was not within the recommended guidelines (i.e. >2.5m). Recommendation: It is recommended that the TMV is repositioned near (<2.5m) the outlet as per HTM guidelines. 	

Description	Performed by / date
#32: Toilet - Location: Baby changing / accessible Wc, Floor: Ground floor, id: 1-597-187 Hazard description: Flexible hoses have been identified on the pipework feeding the outlets. Recommendation: Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible. 	
#33: Washbasin - Location: Baby changing / accessible Wc, Floor: Ground floor, id: 1-597-186 Hazard description: Flexible hoses have been identified on the pipework feeding the outlets. Recommendation: Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible. 	

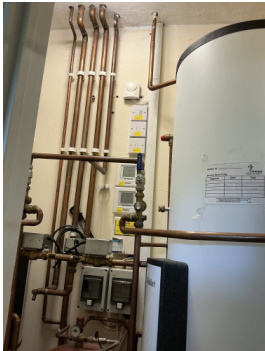
3.2 Medium priority

P2 - Moderate priority – Important to maintain good system hygiene. These are matters which related to accepted standards, code of practice and legal requirement. These actions should be targeted for completion within a month or phased over a 3 month period if appropriate.

Description	Performed by / date
#3: Washbasin - Location: Away team changing room, Floor: Ground floor, id: 1-597-152 Hazard description: Scale was observed being present on the outlet(s). Recommendation: It is recommended that all outlets, showerheads & flexi hoses, and spray taps (where applicable) are descaled, cleaned and disinfected (at least) on a quarterly basis to remove scale and/or debris. Outlets & showerhead descaling, cleaning & disinfection should be recorded in the Water Management Logbook. 	
#5: Shower - Location: Away team changing room, Floor: Ground floor, id: 1-597-155 Hazard description: It was noted during the survey that limescale and/or dirt was present on the showerhead. Recommendation: It is recommended that all outlets, showerheads and flexi hoses are descaled, cleaned and disinfected (at least) on a quarterly basis to remove scale and/or debris. Showerhead descaling, cleaning & disinfection should be recorded in the Water Management Logbook. 	

Description	Performed by / date
#6: Shower - Location: Away team changing room, Floor: Ground floor, id: 1-597-160 Hazard description: It was noted during the survey that limescale and/or dirt was present on the showerhead. Recommendation: It is recommended that all outlets, showerheads and flexi hoses are descaled, cleaned and disinfected (at least) on a quarterly basis to remove scale and/or debris. Showerhead descaling, cleaning & disinfection should be recorded in the Water Management Logbook. 	
#7: Shower - Location: Away team changing room, Floor: Ground floor, id: 1-597-159 Hazard description: It was noted during the survey that limescale and/or dirt was present on the showerhead. Recommendation: It is recommended that all outlets, showerheads and flexi hoses are descaled, cleaned and disinfected (at least) on a quarterly basis to remove scale and/or debris. Showerhead descaling, cleaning & disinfection should be recorded in the Water Management Logbook. 	

Description	Performed by / date
#8: Shower - Location: Away team changing room, Floor: Ground floor, id: 1-597-158 Hazard description: It was noted during the survey that limescale and/or dirt was present on the showerhead. Recommendation: It is recommended that all outlets, showerheads and flexi hoses are descaled, cleaned and disinfected (at least) on a quarterly basis to remove scale and/or debris. Showerhead descaling, cleaning & disinfection should be recorded in the Water Management Logbook. 	
#9: Shower - Location: Away team changing room, Floor: Ground floor, id: 1-597-162 Hazard description: It was noted during the survey that limescale and/or dirt was present on the showerhead. Recommendation: It is recommended that all outlets, showerheads and flexi hoses are descaled, cleaned and disinfected (at least) on a quarterly basis to remove scale and/or debris. Showerhead descaling, cleaning & disinfection should be recorded in the Water Management Logbook. 	

Description	Performed by / date
#10: Washbasin - Location: Female Wc, Floor: Ground floor, id: 1-597-161 Hazard description: Thermostatic mixing valves (TMVs) have been identified on site, but no service records were shown or found during the survey. Recommendation: TMV's require regular routine maintenance carried out by competent persons in accordance with the manufacturer's instructions. 	
#18: Calorifier - Location: Kitchenette cupboard, Floor: Ground floor, id: 1-597-174 Hazard description: It was noted during the survey that there are expansion vessels present on site. There is no record or indication that they are drained or flushed. Recommendation: To minimise the risk of microbial growth, expansion vessels should have an isolation and drain valve to aid flushing and sampling. It is recommended that expansion vessels are removed & drained or flushed every 1-6 months depending on size for 2-3 minutes, taking care to minimise aerosol release, and record actions in the Water Management Logbook. 	
#18: Calorifier - Location: Kitchenette cupboard, Floor: Ground floor, id: 1-597-171 Hazard description: It was noted during the survey that the localised water services pipework had inadequate insulation (none, partial, poorly protected or damaged). Recommendation: It is recommended that the localised pipework is fully thermally insulated to prevent any heat loss or transfer. 	

Description	Performed by / date
#19: Calorifier - Location: Kitchenette cupboard, Floor: Ground floor, id: 1-597-175 Hazard description: It was noted during the survey that there are expansion vessels present on site. There is no record or indication that they are drained or flushed. Recommendation: To minimise the risk of microbial growth, expansion vessels should have an isolation and drain valve to aid flushing and sampling. It is recommended that expansion vessels are removed & drained or flushed every 1-6 months depending on size for 2-3 minutes, taking care to minimise aerosol release, and record actions in the Water Management Logbook. 	
#23: Shower - Location: Home team changing room, Floor: Ground floor, id: 1-597-182 Hazard description: It was noted during the survey that limescale and/or dirt was present on the showerhead. Recommendation: It is recommended that all outlets, showerheads and flexi hoses are descaled, cleaned and disinfected (at least) on a quarterly basis to remove scale and/or debris. Showerhead descaling, cleaning & disinfection should be recorded in the Water Management Logbook. 	

Description	Performed by / date
#26: Shower - Location: Home team changing room, Floor: Ground floor, id: 1-597-181 Hazard description: It was noted during the survey that limescale and/or dirt was present on the showerhead. Recommendation: It is recommended that all outlets, showerheads and flexi hoses are descaled, cleaned and disinfected (at least) on a quarterly basis to remove scale and/or debris. Showerhead descaling, cleaning & disinfection should be recorded in the Water Management Logbook. 	
#27: Shower - Location: Home team changing room, Floor: Ground floor, id: 1-597-180 Hazard description: It was noted during the survey that limescale and/or dirt was present on the showerhead. Recommendation: It is recommended that all outlets, showerheads and flexi hoses are descaled, cleaned and disinfected (at least) on a quarterly basis to remove scale and/or debris. Showerhead descaling, cleaning & disinfection should be recorded in the Water Management Logbook. 	

4 Management & Control Structure

4.1 Responsible Persons

Duty holder

The duty holder is responsible for making sure the operations comply with the law by appointing and overseeing competent responsible persons. The duty holder cannot delegate his duty, but can delegate managerial responsibility to the Nominated Responsible Person.

Role	Name and position	Phone and email
Duty holder	Parish council	01763263303

Nominated responsible persons

The person(s) appointed with the responsibility -under authority of the duty holder- to ensure all operational duties are carried out as they should are called the nominated responsible person.

Role	Name and position	Phone and email
Responsible person	Alexandra Coxall Deputy Clark	01763263303 Assistantclark@melbourneparishcouncil.gov.uk
Deputy responsible person	Terry Muncey Village Warden	

4.2 Management and Implementation Review

Question	Answer	Comment
Is there a current Risk Assessment?	Yes	
Consultant of current risk assessment	4i Water Services - Dave Jones	
Date of current risk assessment	17-07-2023	
Have there been any recent legionella control audits?	No	
Is the building currently unoccupied or operating at reduced occupancy?	No	N/A
Have control measures been increased to address unoccupancy?	n/a	
Are timely and appropriate reactions taken to lapses of control?	Yes	Key Actions to Implement if Lapses in Control Occur: In the event of a control failure, such as loss of temperature regulation or water stagnation, an immediate investigation should be carried out to identify the root cause of the lapse. Appropriate corrective actions should then be implemented. This may include flushing affected parts of the water system, adjusting water temperatures, or other remedial measures to restore safe operating conditions. If there is any concern that the water system may have been compromised, water sampling should be conducted to assess the level of contamination and confirm the effectiveness of remedial actions. Where human error is identified as a contributing factor, the responsible personnel should be provided with updated training and awareness to reinforce correct procedures and responsibilities. All incidents and associated actions must be fully documented to ensure accountability and traceability. Finally, the current control measures should be reviewed to determine whether any changes are needed to prevent future lapses. This may involve revising maintenance routines, enhancing monitoring procedures, or updating operational protocols.
Were there any escalations?	No	N/A

Question	Answer	Comment
Are there historical records of the water system maintenance?	No	No historical water hygiene records were available on site at the time of the assessment. As a result, previous monitoring, maintenance, inspection and remedial works could not be verified. It is recommended that any available historical records are obtained and retained on site or within the central record keeping system to provide an accurate audit trail and demonstrate that appropriate water hygiene management and control measures are being consistently maintained.
Is there a scheme for safe operation of the water system(s)?	Yes	

4.3 Written Scheme of Control Review

Question	Answer	Comment
Primary method of control	Temperature N/A	
Is there a written scheme of control?	No	No written scheme was available on site at the time of the assessment. The written scheme should clearly detail the management arrangements, control measures, monitoring requirements and responsibilities for the site's hot and cold water systems. It is recommended that a suitable written scheme is developed and made readily available on site to ensure that water hygiene control measures are clearly documented, understood and consistently implemented.

4.4 Schematics and Asset Register Review

Question	Answer	Comment
Is there an asset register?	Yes	Asset Register is up-to-date An asset register is included within the previous risk assessment and provides a record of the organisation's key physical assets, equipment, and infrastructure. The register supports the risk assessment process by identifying assets that require protection, helping to assess potential risks and vulnerabilities, and informing appropriate control measures.
Are there schematic drawings of the water system(s)?	Yes	

4.5 Training and Competency Review

Question	Answer	Comment
Are training records and records of competence checks for on-site personnel and contractors present?	No	No training records were found on site, although they may be stored elsewhere or maintained electronically. Training records are essential to demonstrate that staff have received appropriate instruction on water system management and compliance with ACoP L8. It is recommended that all records, whether physical or digital, are accessible and kept up to date.
Are records of competence present?	Yes	All records relating to staff competence are present and maintained both digitally and in the onsite logbook. These records demonstrate that personnel managing and maintaining the water systems have the appropriate training and qualifications. Keeping records in both formats ensures accessibility, traceability, and compliance with ACoP L8, while supporting regular review of training and competency levels.

4.6 Document Review

Question	Answer	Comment
Are monitoring and inspection records present?	Yes	Monitoring and inspection activities are being carried out in accordance with the site's water management procedures, with historical records readily available for review and assessment. Records relating to inspections, cleaning, disinfection, temperature monitoring, flushing, and any corrective actions undertaken were found to be clear, comprehensive, and well maintained.
Are logbooks present on-site?	No	

4.7 Scheme of Safe Operation

Below, you'll find the Scheme of Control, specifically for this site. Tasks are based on 'Table 2.1: Checklist for hot and cold water systems', as described in the Health and Safety Guidance 274 part 2 that you can find on <https://www.hse.gov.uk/pUbns/priced/hsg274part2.pdf>.

Control measure	Number of outlets
One off	
Flushing (long term)	12
Temperature Checks	1
Monthly	
Temperature Checks	3
Annually	
Maintenance	3

5 Assessment of the Water Systems

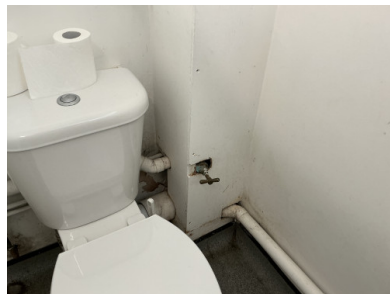
This chapter contains all site information and surveyed assets.

Systems that do not present a legionella risk or are excluded
N/A

5.1 Water source

Incoming mains		
Asset #34	Away team changing room	Ground floor
Water meter present		No
Pipework material		Unkown
Pipework size		Unkown
Pipework condition		Unknown
Insulation condition		Unknown
Isolation valve fitted		Yes
Drain valve fitted		No
Ambient temperature		24.0 °C
Incoming pipework / water supply temperature		17.4 °C
Pipework labelling		No
Frequency of use		Less than weekly
Aerosol-forming		No
Asset condition satisfactory?		Yes

Photographs taken for Incoming mains #34



5.2 Water Heaters & Expansion Vessels

Instantaneous water heater		
Asset #17	Kitchenette	Ground floor
Frequency of use		Less than weekly
Aerosol-forming		Yes
Diameter		15mm
Type of water		Potable
Heater accessible		Yes
Access details		Access to instantaneous water heater is satisfactory
Heater room condition		Satisfactory
Lighting		Yes
Power supply		Yes
Manufacturer and model		Redring vortex instant 3
Construction material		Copper
Capacity (L)		Instantaneous
Dimensions (M)		L / W / H: 100 x 100 x 210
Insulation condition		Unsatisfactory
External condition		Satisfactory
Tank position		Horizontal
Heat source		Electric
Linked units (if applicable)		
Output type		Mains Pressure
Pump position		N/A
Anti-stratification pump		Not applicable
Pump timer present		No
Drain valve		Not applicable
Drain water condition		
State of the construction material		Satisfactory
Estimated turnover		Satisfactory
Heater label		No
Inspection hatch present		No
Heater operational		Yes
Header tank condition		
Header tank temperature		
Supply source		
Supply pipe size (mm)		15mm
Supply pipe material		Copper
Supply valve		Satisfactory
Supply insulation		Unsatisfactory
Supply label		No

(continued) Instantaneous water heater #17	
Flow pipe size (mm)	10mm
Flow pipe material	Chrome
Flow valve	Not applicable
Flow insulation	Not applicable
Flow label	No
Temperature gauge	Not applicable
Flow temperature	50.3 °C
Return pipe	No
Return pipe size (mm)	N/A
Return pipe material	N/A
Return valve	Not applicable
Return insulation	Not applicable
Return label	No
Return temperature	
Temperature gauge	Not applicable
Overflow pipework fitted to header tank?	No
Overflow pipeworker fitted with suitable insect/rodent screen?	No
Header tank lid fitted with a lid vent?	No
Pump timer present	No
Minimum cold temperature input	
Minimum hot temperature output	
Return temperature time?	N/A
Evidence of thermal crossover?	No
Is backflow protection in place?	No
Type of backflow prevention present	
Potential for stratification?	No
Is circulation balanced where multiple heaters/return legs are present?	Not applicable
Use of tempering/mixing valves that may limit temperature or introduce	No
Are the tempering valves/central mixing valves producing water at the	No
Cold water temperature	
Hot water temperature	
Room temperature	
Mixed water temperature	

Photographs taken for Instantaneous water heater #17

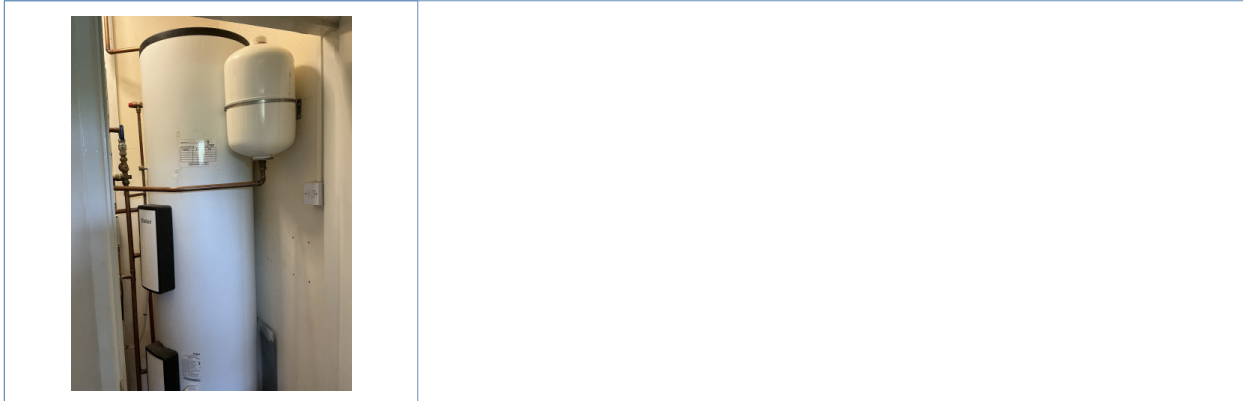


Calorifier		
Asset #18	Kitchenette cupboard	Ground floor
Frequency of use	Less than weekly	
Heater accessible	Yes	
Access details		
Manufacturer and model	Vaillant	
Construction material	Stainless steel	
Capacity (L)	300	
Insulation condition	Satisfactory	
External condition	Satisfactory	
Heat source	Primary coil	
Output type	Mains Pressure	
Drain valve	Satisfactory	
State of the construction material	Satisfactory	
Estimated turnover		
Heater label	No	
Inspection hatch present	No	
Heater operational		
Supply source		
Flow pipe material	22mm	
Flow valve	Not applicable	
Flow insulation	Unsatisfactory	
Temperature gauge	Not applicable	
Flow temperature	55.7 °C	
Return pipe	No	
Return temperature		
Temperature gauge	Not applicable	

Technical recommendations for Calorifier #18

Recommendations to reduce the risk	Priority
It is recommended that the localised pipework is fully thermally insulated to prevent any heat loss or transfer.	Medium
It is recommended that a destratification pump is installed to ensure uniform temperature within the cylinder.	High
To minimise the risk of microbial growth, expansion vessels should have an isolation and drain valve to aid flushing and sampling. It is recommended that expansion vessels are removed & drained or flushed every 1-6 months depending on size for 2-3 minutes, taking care to minimise aerosol release, and record actions in the Water Management Logbook.	Medium

Photographs taken for Calorifier #18

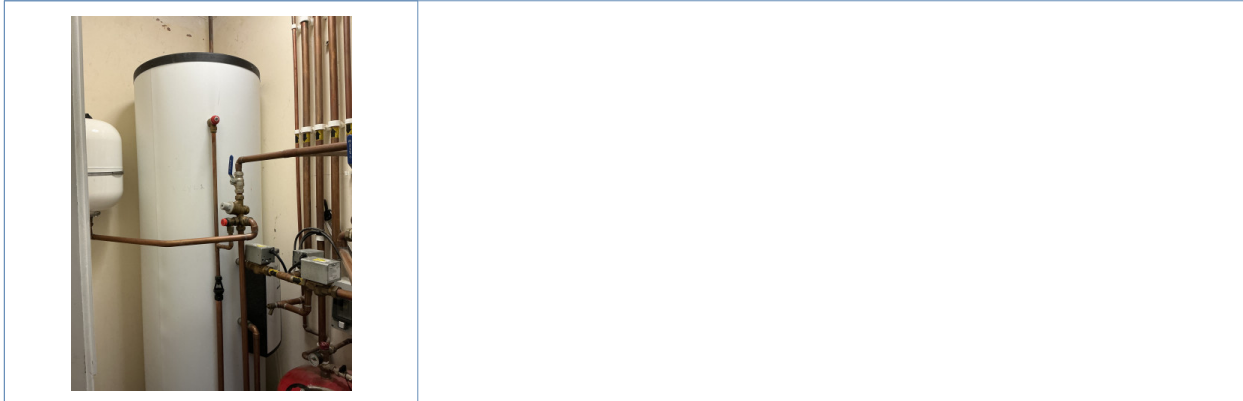


Calorifier		
Asset #19	Kitchenette cupboard	Ground floor
Frequency of use		Less than weekly
Heater accessible		Yes
Access details		
Manufacturer and model		Vaillant
Construction material		Stainless steel
Capacity (L)		300
Insulation condition		Satisfactory
External condition		Satisfactory
Heat source		Primary coil
Output type		Mains Pressure
Drain valve		Satisfactory
State of the construction material		Satisfactory
Estimated turnover		
Heater label		No
Inspection hatch present		No
Heater operational		
Supply source		
Flow pipe material		22mm
Flow valve		Not applicable
Flow insulation		Unsatisfactory
Temperature gauge		Not applicable
Flow temperature		55.7 °C
Return pipe		No
Return temperature		
Temperature gauge		Not applicable

Technical recommendations for Calorifier #19

Recommendations to reduce the risk	Priority
To minimise the risk of microbial growth, expansion vessels should have an isolation and drain valve to aid flushing and sampling. It is recommended that expansion vessels are removed & drained or flushed every 1-6 months depending on size for 2-3 minutes, taking care to minimise aerosol release, and record actions in the Water Management Logbook.	Medium
It is recommended that a destratification pump is installed to ensure uniform temperature within the cylinder.	High

Photographs taken for Calorifier #19



5.3 Hot & cold water distribution - Outlets

Description			Source			Temperature			Sentinel		Aerosol risk	Level of scale	Frequency of use	No. of technical recommendations	Comment
Asset no.	Floor / Location	Type of outlet	Cold	Hot	Mixed	Cold	Hot	Mixed	Cold	Hot					
#1	Ground floor/ Away team changing room	Urinal									N	L	L		Urinals are supplied by town mains Urinal was found in satisfactory condition
#2	Ground floor/ Away team changing room	Toilet									N	L	L	1	Toilet is supplied by town mains Toilet is fully operational
#3	Ground floor/ Away team changing room	Washbasin				16.9	53.7	42.0			N	L	L	2	Wash hand basin is supplied by town mains and HWSV 01 & 02 Basin was found in satisfactory condition
#4	Ground floor/ Away team changing room	Washbasin				16.7	53.0	42.1		F	N	L	L	2	Wash hand basin is supplied by town mains and HWSV 01 & 02 Basin was found in satisfactory condition
#5	Ground floor/ Away team changing room	Shower				17.2	54.0	42.7			Y	L	L	1	Shower is supplied by town mains and HWSV 01 & 02 Shower is fully operational
#6	Ground floor/ Away team changing room	Shower				16.9	53.3	42.6			Y	L	L	1	Shower is supplied by town mains and HWSV 01 & 02 Shower is fully operational
#7	Ground floor/ Away team changing room	Shower				17.2	54.0	42.7			Y	L	L	1	Shower is supplied by town mains and HWSV 01 & 02 Shower is fully operational

Description			Source			Temperature			Sentinel		Aerosol risk	Level of scale	Frequency of use	No. of technical recommendations	Comment
Asset no.	Floor / Location	Type of outlet	Cold	Hot	Mixed	Cold	Hot	Mixed	Cold	Hot					
#8	Ground floor/ Away team changing room	Shower				17.0	54.0	42.7			Y	L	L	1	Shower is supplied by town mains and HWSV 01 & 02 Shower is fully operational
#9	Ground floor/ Away team changing room	Shower				17.0	54.1	42.7			Y	L	L	2	Shower is supplied by town mains and HWSV 01 & 02 Shower is fully operational
#10	Ground floor/ Female Wc	Washbasin				17.3	53.4	39.8			N	L	L	2	Wash hand basin is supplied by town mains and HWSV 01 & 02 Basin was found in satisfactory condition
#11	Ground floor/ Female Wc	Washbasin				17.8	53.3	39.8		F	N	L	L		Wash hand basin is supplied by town mains and HWSV 01 & 02 Basin was found in satisfactory condition
#12	Ground floor/ Female Wc	Toilet									N	L	L	1	Toilet is supplied by town mains Toilet is fully operational
#13	Ground floor/ Female Wc	Toilet									N	L	L	1	Toilet is supplied by town mains Toilet is fully operational
#14	Ground floor/ Female Wc	Toilet									N	L	L	1	Toilet is supplied by town mains Toilet is fully operational
#15	Ground floor/ Kitchenette	Sink				18.9	55.6		N	N	N	L	L		Sink is supplied by town mains and HWSV 01 & 02 Sink is fully operational

Description			Source			Temperature			Sentinel		Aerosol risk	Level of scale	Frequency of use	No. of technical recommendations	Comment
Asset no.	Floor / Location	Type of outlet	Cold	Hot	Mixed	Cold	Hot	Mixed	Cold	Hot					
#16	Ground floor/ Kitchenette	Washbasin				20.7	50.3				N	L	L		Wash hand basin is supplied by town mains and instantaneous water heater Basin was found in satisfactory condition
#20	Ground floor/ Home team changing room	Urinal									N	L	L		Urinals are supplied by town mains Urinal was found in satisfactory condition
#21	Ground floor/ Home team changing room	Washbasin				16.9	54.0	36.8			N	L	L	2	Wash hand basin is supplied by town mains and HWSV 01 & 02 Basin was found in satisfactory condition
#22	Ground floor/ Home team changing room	Washbasin				16.7	53.0	36.8		F	N	L	L	1	Wash hand basin is supplied by town mains and HWSV 01 & 02 Basin was found in satisfactory condition
#23	Ground floor/ Home team changing room	Shower				17.2	54.0	42.7			Y	L	L	1	Shower is supplied by town mains and HWSV 01 & 02 Shower is fully operational
#24	Ground floor/ Home team changing room	Shower				18.7	53.6	41.8			Y	L	L		Shower is supplied by town mains and HWSV 01 & 02 Shower is fully operational
#25	Ground floor/ Home team changing room	Shower				17.2	53.6	41.7			Y	L	L		Shower is supplied by town mains and HWSV 01 & 02 Shower is fully operational

Description			Source			Temperature			Sentinel		Aerosol risk	Level of scale	Frequency of use	No. of technical recommendations	Comment
Asset no.	Floor / Location	Type of outlet	Cold	Hot	Mixed	Cold	Hot	Mixed	Cold	Hot					
#26	Ground floor/ Home team changing room	Shower				17.4	54.0	36.7			Y	L	L	1	Shower is supplied by town mains and HWSV 01 & 02 Shower is fully operational
#27	Ground floor/ Home team changing room	Shower				17.8	54.1	36.8			Y	L	L	1	Shower is supplied by town mains and HWSV 01 & 02 Shower is fully operational
#28	Ground floor/ Male Wc	Urinal									N	L	L		Urinals are supplied by town mains Urinal was found in satisfactory condition
#29	Ground floor/ Male Wc	Toilet									N	L	L	1	Toilet is supplied by town mains Toilet is fully operational
#30	Ground floor/ Male Wc	Washbasin				18.3	54.0	36.8			N	L	L	2	Wash hand basin is supplied by town mains and HWSV 01 & 02 Basin was found in satisfactory condition
#31	Ground floor/ Male Wc	Washbasin				18.0	54.0	36.8		F	N	L	L		Wash hand basin is supplied by town mains and HWSV 01 & 02 Basin was found in satisfactory condition
#32	Ground floor/ Baby changing / accessible Wc	Toilet									N	L	L	1	Toilet is supplied by town mains Toilet is fully operational
#33	Ground floor/ Baby changing / accessible Wc	Washbasin				17.8	54.0	36.8			N	L	L	1	Wash hand basin is supplied by town mains and HWSV 01 & 02 Basin was found in satisfactory condition

Level of scale: N: no scale; L: low; M: moderate; H: heavy

Aerosol risk: N: no risk; L: low; M: moderate; H: high, Y: yes

Frequency of use: D: daily; W: Weekly; L: less than weekly; O: occasionally or never

Sentinel type: N: nearest; F: furthest; NM: nominated; X: unspecified

Technical recommendations for outlets

Recommendations to reduce the risk	Priority
#2 Toilet - Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible.	High
#3 Washbasin - It is recommended that all outlets, showerheads & flexi hoses, and spray taps (where applicable) are descaled, cleaned and disinfected (at least) on a quarterly basis to remove scale and/or debris. Outlets & showerhead descaling, cleaning & disinfection should be recorded in the Water Management Logbook.	Medium
#3 Washbasin - Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible.	High
#6 Shower - It is recommended that all outlets, showerheads and flexi hoses are descaled, cleaned and disinfected (at least) on a quarterly basis to remove scale and/or debris. Showerhead descaling, cleaning & disinfection should be recorded in the Water Management Logbook.	Medium
#5 Shower - It is recommended that all outlets, showerheads and flexi hoses are descaled, cleaned and disinfected (at least) on a quarterly basis to remove scale and/or debris. Showerhead descaling, cleaning & disinfection should be recorded in the Water Management Logbook.	Medium
#4 Washbasin - It is recommended that all outlets, showerheads & flexi hoses, and spray taps (where applicable) are descaled, cleaned and disinfected (at least) on a quarterly basis to remove scale and/or debris. Outlets & showerhead descaling, cleaning & disinfection should be recorded in the Water Management Logbook.	High
#4 Washbasin - Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible.	High
#9 Shower - It is recommended that all outlets, showerheads and flexi hoses are descaled, cleaned and disinfected (at least) on a quarterly basis to remove scale and/or debris. Showerhead descaling, cleaning & disinfection should be recorded in the Water Management Logbook.	Medium
#9 Shower - It is recommended that the TMV is repositioned near (<2.5m) the outlet as per HTM guidelines.	High
#7 Shower - It is recommended that all outlets, showerheads and flexi hoses are descaled, cleaned and disinfected (at least) on a quarterly basis to remove scale and/or debris. Showerhead descaling, cleaning & disinfection should be recorded in the Water Management Logbook.	Medium
#8 Shower - It is recommended that all outlets, showerheads and flexi hoses are descaled, cleaned and disinfected (at least) on a quarterly basis to remove scale and/or debris. Showerhead descaling, cleaning & disinfection should be recorded in the Water Management Logbook.	Medium
#12 Toilet - Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible.	High
#10 Washbasin - TMV's require regular routine maintenance carried out by competent persons in accordance with the manufacturer's instructions.	Medium
#10 Washbasin - Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible.	High
#14 Toilet - Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible.	High
#13 Toilet - Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible.	High

Recommendations to reduce the risk	Priority
#21 Washbasin - It is recommended that the TMV is repositioned near (<2.5m) the outlet as per HTM guidelines.	High
#21 Washbasin - Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible.	High
#23 Shower - It is recommended that all outlets, showerheads and flexi hoses are descaled, cleaned and disinfected (at least) on a quarterly basis to remove scale and/or debris. Showerhead descaling, cleaning & disinfection should be recorded in the Water Management Logbook.	Medium
#22 Washbasin - Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible.	High
#27 Shower - It is recommended that all outlets, showerheads and flexi hoses are descaled, cleaned and disinfected (at least) on a quarterly basis to remove scale and/or debris. Showerhead descaling, cleaning & disinfection should be recorded in the Water Management Logbook.	Medium
#26 Shower - It is recommended that all outlets, showerheads and flexi hoses are descaled, cleaned and disinfected (at least) on a quarterly basis to remove scale and/or debris. Showerhead descaling, cleaning & disinfection should be recorded in the Water Management Logbook.	Medium
#30 Washbasin - It is recommended that the TMV is repositioned near (<2.5m) the outlet as per HTM guidelines.	High
#30 Washbasin - It is recommended that the TMV is repositioned near (<2.5m) the outlet as per HTM guidelines.	High
#29 Toilet - Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible.	High
#33 Washbasin - Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible.	High
#32 Toilet - Generally, it is recommended that copper piping is used to connect the outlets with the water supply where possible.	High

Photographs taken for outlets

		
Toilet #2	Urinal #1	Washbasin #3



Washbasin
#3



Shower
#6



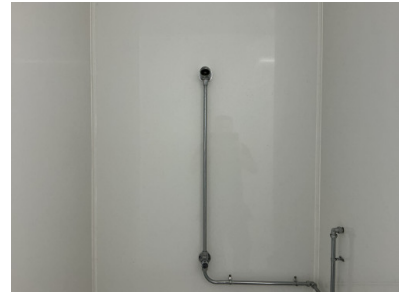
Shower
#5



Washbasin
#4



Washbasin
#4



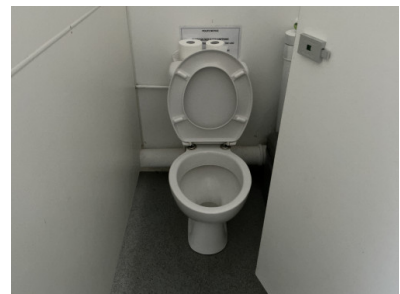
Shower
#9



Shower
#7



Shower
#8



Toilet
#12



Washbasin
#11



Washbasin
#11



Washbasin
#10



Washbasin
#10



Sink
#15



Toilet
#14



Toilet
#13



Washbasin
#16



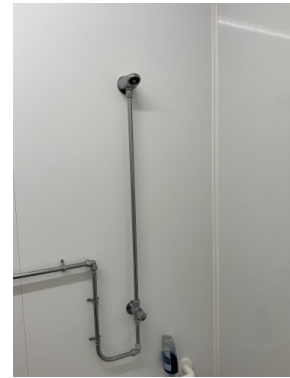
Washbasin
#21



Urinal
#20



Shower
#24



Shower
#23



Washbasin
#22



Shower
#27



Shower
#26



Shower
#25



Washbasin
#30



Toilet
#29



Urinal
#28



Washbasin
#33



Toilet
#32



Washbasin
#31

6 Asset Register

The left-hand columns of the table below list all the components of your building's water system, as well as their unique identification number, location and water supply. The right-hand columns list the findings of our assessment, as well as the measures you'll need to take to control Legionella growth. We've based our findings on the comprehensive risk assessment as detailed in Chapter 5.

Asset no.	Floor/Location	Description outlet	Water	Assessment	Remarks
#34	Ground floor/ Away team changing room	Incoming mains	C	Satisfactory	Town mains supplies the majority of site
#1	Ground floor/ Away team changing room	Urinal	C	Satisfactory	Urinals are supplied by town mains Urinal was found in satisfactory condition
#2	Ground floor/ Away team changing room	Toilet	C	Satisfactory	Toilet is supplied by town mains Toilet is fully operational
#3	Ground floor/ Away team changing room	Washbasin	C&H	Satisfactory	Wash hand basin is supplied by town mains and HWSV 01 & 02 Basin was found in satisfactory condition
#4	Ground floor/ Away team changing room	Washbasin	C&H	Satisfactory	Wash hand basin is supplied by town mains and HWSV 01 & 02 Basin was found in satisfactory condition
#5	Ground floor/ Away team changing room	Shower	C&H	Satisfactory	Shower is supplied by town mains and HWSV 01 & 02 Shower is fully operational
#6	Ground floor/ Away team changing room	Shower	C&H	Satisfactory	Shower is supplied by town mains and HWSV 01 & 02 Shower is fully operational
#7	Ground floor/ Away team changing room	Shower	C&H	Satisfactory	Shower is supplied by town mains and HWSV 01 & 02 Shower is fully operational
#8	Ground floor/ Away team changing room	Shower	C&H	Satisfactory	Shower is supplied by town mains and HWSV 01 & 02 Shower is fully operational
#9	Ground floor/ Away team changing room	Shower	C&H	Satisfactory	Shower is supplied by town mains and HWSV 01 & 02 Shower is fully operational
#10	Ground floor/ Female Wc	Washbasin	C&H	Satisfactory	Wash hand basin is supplied by town mains and HWSV 01 & 02 Basin was found in satisfactory condition
#11	Ground floor/ Female Wc	Washbasin	C&H	Satisfactory	Wash hand basin is supplied by town mains and HWSV 01 & 02 Basin was found in satisfactory condition

Asset no.	Floor/Location	Description outlet	Water	Assessment	Remarks
#12	Ground floor/ Female Wc	Toilet	C	Satisfactory	Toilet is supplied by town mains Toilet is fully operational
#13	Ground floor/ Female Wc	Toilet	C	Satisfactory	Toilet is supplied by town mains Toilet is fully operational
#14	Ground floor/ Female Wc	Toilet	C	Satisfactory	Toilet is supplied by town mains Toilet is fully operational
#15	Ground floor/ Kitchenette	Sink	C&H	Satisfactory	Sink is supplied by town mains and HWSV 01 & 02 Sink is fully operational
#16	Ground floor/ Kitchenette	Washbasin	C&H	Satisfactory	Wash hand basin is supplied by town mains and instantaneous water heater Basin was found in satisfactory condition
#17	Ground floor/ Kitchenette	Instantaneous water heater	C	Satisfactory	Water heater is supplied by town mains
#18	Ground floor/ Kitchenette cupboard	Calorifier	H	Satisfactory	Cylinder is supplied by town mains
#19	Ground floor/ Kitchenette cupboard	Calorifier	H	Satisfactory	Cylinder is supplied by town mains
#20	Ground floor/ Home team changing room	Urinal	C	Satisfactory	Urinals are supplied by town mains Urinal was found in satisfactory condition
#21	Ground floor/ Home team changing room	Washbasin	C&H	Satisfactory	Wash hand basin is supplied by town mains and HWSV 01 & 02 Basin was found in satisfactory condition
#22	Ground floor/ Home team changing room	Washbasin	C&H	Satisfactory	Wash hand basin is supplied by town mains and HWSV 01 & 02 Basin was found in satisfactory condition
#23	Ground floor/ Home team changing room	Shower	C&H	Satisfactory	Shower is supplied by town mains and HWSV 01 & 02 Shower is fully operational
#24	Ground floor/ Home team changing room	Shower	C&H	Satisfactory	Shower is supplied by town mains and HWSV 01 & 02 Shower is fully operational
#25	Ground floor/ Home team changing room	Shower	C&H	Satisfactory	Shower is supplied by town mains and HWSV 01 & 02 Shower is fully operational
#26	Ground floor/ Home team changing room	Shower	C&H	Satisfactory	Shower is supplied by town mains and HWSV 01 & 02 Shower is fully operational
#27	Ground floor/ Home team changing room	Shower	C&H	Satisfactory	Shower is supplied by town mains and HWSV 01 & 02 Shower is fully operational

Asset no.	Floor/Location	Description outlet	Water	Assessment	Remarks
#28	Ground floor/ Male Wc	Urinal	C	Satisfactory	Urinals are supplied by town mains Urinal was found in satisfactory condition
#29	Ground floor/ Male Wc	Toilet	C	Satisfactory	Toilet is supplied by town mains Toilet is fully operational
#30	Ground floor/ Male Wc	Washbasin	C&H	Satisfactory	Wash hand basin is supplied by town mains and HWSV 01 & 02 Basin was found in satisfactory condition
#31	Ground floor/ Male Wc	Washbasin	C&H	Satisfactory	Wash hand basin is supplied by town mains and HWSV 01 & 02 Basin was found in satisfactory condition
#32	Ground floor/ Baby changing / accessible Wc	Toilet	C	Satisfactory	Toilet is supplied by town mains Toilet is fully operational
#33	Ground floor/ Baby changing / accessible Wc	Washbasin	C&H	Satisfactory	Wash hand basin is supplied by town mains and HWSV 01 & 02 Basin was found in satisfactory condition

Appendices

Appendix 1: References

- Control of Substances Hazardous to Health Regulations 2002
- Health and Safety at Work etc. Act 1974
- The Management of Health and Safety at Work Regulations 1999
- The Water Supply (Water Fittings) Regulations 1999
- The Water Supply (Water Quality) Regulations 2018
- The Private Water Supplies (England) Regulations 2016
- BS 1710. Specification for identification of pipelines and services. British Standards Institution.
- BS 6920 [All Parts]. Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water.
- BS 7592. Sampling for Legionella bacteria in water systems. Code of practice. British Standards Institution.
- BS 8551. Provision and management of temporary water supplies and distribution networks (not including provisions for statutory emergencies). Code of practice.
- BS 8554. Code of practice for the sampling and monitoring of hot and cold water services in buildings. British Standards Institution.
- BS 8558. Guide to the design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages. Complementary guidance to BS EN 806. British Standards Institution.
- BS 8580. Water quality. Risk assessments for Legionella control. Code of practice. British Standards Institution.
- BS EN 805. Water supply. Requirements for systems and components outside buildings. British Standards Institution.
- BS EN 806 [All Parts]. Specifications for installations inside buildings conveying water for human consumption. British Standards Institution.
- BS EN 902. Chemicals used for treatment of water intended for human consumption - Hydrogen Peroxide.
- BS EN 937. Chemicals used for treatment of water intended for human consumption - Chlorine.
- BS EN 12671. Chemicals used for treatment of water intended for human consumption - Chlorine Dioxide.
- BS EN 1717. Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow. British Standards Institution.
- PD 855468. Guide to the flushing and disinfection of services supplying water for domestic use within buildings and their curtilages. British Standards Institution.
- BSRIA. BG3 – Maintenance for building services.
- BSRIA. BG 57/2015 – Legionnaires’ disease – risk assessment.
- BSRIA. FMS 4/99 – Guidance and the standard specification for water services risk assessment.
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- Health and Safety Executive. Approved Code of Practice and guidance on regulations. Legionnaires’ disease: The control of Legionella bacteria in water systems (L8).
- Health and Safety Executive. HSG274 Legionnaires’ disease – technical guidance. Part 1
- Health and Safety Executive. HSG274 Legionnaires’ disease – technical guidance. Part 2
- Health and Safety Executive. HSG274 Legionnaires’ disease – technical guidance. Part 3
- Health and Safety Executive. HSG179 Health and safety in swimming pools.
- Health and Safety Executive. HSG282 The control of legionella and other infectious agents in spa-pool systems.
- Building Regulations Approved Document G - Sanitation, hot water safety and water efficiency.
- Thermostatic mixing valves (healthcare premises) NHS Model Engineering Specifications D08 NHS.
- Health Technical Memorandum 04-01: Safe water in healthcare premises: Part A: design, installation

and commissioning.

- Health Technical Memorandum 04-01: Safe water in healthcare premises: Part B: operational management.
- Joint Service Publication 375. Volume 1 Chapter 32 Legionella.
- Pool Water Treatment Advisory Group Code of Practice

Appendix 2: Glossary

- Acid - A chemical that reduces the pH of water and reacts with alkali or base; it is commonly used for removing scale and other deposits from systems and sometimes it is used as a scale inhibitor.
- Adenosine triphosphate (ATP) - A chemical in cells used as an energy source for metabolic purposes. Its concentration in water can be used to estimate microbial population density.
- Adiabatic cooler/condenser - A term used to describe a heat rejection device that normally operates in dry mode but which can also operate using evaporative cooling to pre-cool the air stream with water. This increases the device's cooling capacity when ambient air temperatures are high, e.g. in the summer months.
- Aerosol - A suspension in a gaseous medium of solid particles, liquid particles or solid and liquid particles that have negligible falling velocity. In the context of this document, it is a suspension of particles that may contain legionella with a typical droplet size of <5 m, which can be inhaled deep into the lungs.
- Air conditioning - A form of air treatment whereby temperature, humidity, ventilation and air cleanliness are controlled within the limits determined by the requirements of the air-conditioned enclosure.
- Algae - Simple organisms, similar to plants, that require light for growth. They are typically found in aquatic environments.
- Alkali - A chemical that increases the pH of water and reacts with an acid.
- Alkalinity The concentration of alkali in water (measured by titration with standard acid solution).
- Antibodies Substances - In the blood that destroy or neutralise toxins or components of bacteria generally known as antigens; they are formed as a result of the introduction into the body of the antigen to which they are antagonistic.
- Bacterium (plural bacteria) - A microscopic, unicellular, prokaryotic organism, without a nuclear membrane.
- Balance pipes - The pipes between adjoining duty towers and between duty and standby towers.
- Biocide - A substance that kills microorganisms.
- Biofilm - A community of microorganisms of different types growing together on a surface where they form a slime layer.
- Bleed - A deliberate intermittent or continuous discharge of system water to drain that allows the admission of make-up water to the system, thereby controlling the concentration of dissolved or suspended solids in the water.
- Blow-down - Another term for bleed.
- Bromine - An element very similar to chlorine that is used as a biocide and sometimes as a

disinfectant. The main practical difference between bromine and chlorine when used as a biocide is that bromine remains effective at higher pH levels.

- Chlorinate - To add chlorine to water, usually in the form of a hypochlorite.
- Chlorine - An element used as a biocide and for disinfection (see bromine, combined chlorine and free chlorine).
- Chlorine dioxide - A compound used as a biocide.
- Cold water service - Installation of plant, pipes and fitting in which cold water is stored, distributed and subsequently discharged.
- Combined chlorine - The amount of chlorine that has reacted with nitrogenous or organic materials to form chlorine compounds. If the materials are nitrogenous then the compounds formed are chloramines.
- Concentration factor - Compares the level of dissolved solids in the cooling water with that dissolved in the make-up water (also known as cycles of concentration or concentration ratio). Usually determined by comparison of either the chloride or magnesium concentration.
- Conductivity - The capacity of the ions in the water to carry electrical current. Conductivity measurement is used to estimate the total dissolved solids (TDS) in the water. The results are expressed as microsiemens/cm (S/cm) and are temperature-dependent. TDS can be calculated by multiplying the conductivity level with a conversion factor of 0.7. Care should be taken not to confuse conductivity and TDS figures (see total dissolved solids).
- Conductivity controller - A device that measures the electrical conductivity of water and helps control it to a pre-set value.
- Contact time - The time a chemical is retained in the system.
- Cooling water system - A heat exchange system comprising a heat rejection plant and interconnecting pipework for recirculating water (with associated pumps, valves and controls).
- Corrosion coupons - In water circuits, these are small strips of various types of metal placed in racks that can easily be removed, weighed and/or inspected to enable the corrosion characteristics of the water to be assessed.
- Corrosion inhibitors - Chemicals designed to prevent or slow down the waterside corrosion of metals.
- Culture - The technique of detecting and enumerating bacteria by growing them on an artificial medium such as agar.
- Deadleg - A length of water system pipework that leads to a fitting through which water only passes when there is draw off from the fitting, thereby providing the potential for stagnation.
- Dip slide - Coated plastic slide on which microorganisms can be grown, examined and quantified. They provide a broad indication of microbial growth only.

- Disinfection - The reduction of the number of microorganisms to safe levels by either chemical or non-chemical means (e.g. biocides, heat or radiation).
- Dispersant - A chemical that loosens organic material adhering to surfaces. Dispersants are commonly used to loosen biofilm.
- DPD No 1 - An indicator used in the colorimetric determination of the concentration of oxidising biocides. DPD No 1 reacts to the presence of strong biocidal species, including free chlorine and total bromine (free and combined).
- Drift - Water droplets and aerosols suspended in the air that discharges from a cooling tower or evaporative condenser. Note that the visible plume often seen above cooling towers under cool conditions is likely to be condensing water vapour (evaporated in the cooling process) rather than system water droplets/aerosol carried over.
- Drift eliminator - Equipment containing a complex system of baffles designed to minimise the drift (see drift) discharging from a cooling tower or evaporative condenser.
- Evaporative cooling - The process of evaporating part of a liquid to remove the latent heat from the main bulk of the liquid. In this way, the bulk of the liquid is cooled.
- Free chlorine - The amount of chlorine available to act as a disinfectant in water. Note that disinfection properties are strongly affected by the pH of the water and decline rapidly in alkaline conditions.
- Half-life - The time taken for the level of a treatment chemical to decrease to half its original value.
- Halogen - A grouping of chemical elements that include bromine and chlorine.
- Heat exchanger - A device for transferring heat between fluids that are not in direct contact with each other.
- Hypobromite ion (OBr) - A form of bromine that is predominant at higher pH levels. While it has biocidal properties, it is less effective as a biocide than hypobromous acid.
- Hypobromous acid (HOBr) - The form of bromine that is most effective as a biocide.
- Hypochlorite ion (OCl) - A form of chlorine that is predominant at higher pH levels. While it has biocidal properties, it is less effective as a biocide than hypochlorous acid.
- Hypochlorous acid (HOCl) - The form of chlorine that is most effective as a biocide.
- Incubation temperature - The temperature at which dip slides or inoculated culture media should be held, for long enough for bacterial growth to become evident. The incubation temperature depends on the type of microorganism being tested in the water sample.
- Langelier saturation index (LSI) - A calculation used to assess the corrosiveness or scaling potential of water. It measures the tendency of water to deposit or dissolve calcium carbonate, helping to determine its balance. LSI values above zero suggest the water is scaling, while negative values indicate corrosion potential.

- Legionella (plural legionellae) - A bacterium (or bacteria) of the genus Legionella.
- Legionella pneumophila - A species of bacterium that is the most common cause of Legionnaires' disease and Pontiac fever.
- Legionnaires' disease - A form of pneumonia caused by bacteria of the genus Legionella.
- Limit of detection - The lowest amount of a substance that can be reliably detected by a specific scientific method or instrument.
- Make-up water - Fresh water that is added to a recirculating water system to compensate for losses by evaporation, bleed, drift, windage and leakage.
- mg/l (milligrams per litre) - A measure of dissolved substances given as the number of parts there are in a million parts of solvent. It is numerically equivalent to ppm (parts per million) with respect to water.
- Microorganism - An organism of microscopic size, including bacteria, fungi and viruses.
- Neonates - Newborn children.
- Nutrient - A food source for microorganisms.
- Pasteurisation - Heat treatment to destroy microorganisms, usually at high temperature.
- pH - The logarithm of the reciprocal of the hydrogen ion concentration in water, expressed as a number between 0 and 14. The pH value indicates how acidic or alkaline the water is; values below 7 are increasingly acidic, 7 is neutral, and values higher than 7 are progressively alkaline. Acidity and alkalinity, however, are not proportional to pH (see acidity and alkalinity).
- Scale inhibitor - Chemical added to water to inhibit scale formation.
- Scaling indices - These are predictors for the scale-forming or corrosive properties of the water.
- Shot dose - A single dose of a chemical, sometimes called a 'shock' or 'shot' dose. It can also describe routine high-concentration periodic dosing (such as with non-oxidising biocides or dispersants) to distinguish the dosing from maintaining a low concentration of chemical continuously.
- Total dissolved solids (TDS) - The quantity of solids dissolved in the water, measured in mg/l. These solids will typically include calcium and magnesium (sodium in softened water), bicarbonate, chloride, sulphate and traces of other materials. TDS can be measured directly or determined indirectly from the conductivity reading (see conductivity).
- Total viable counts (TVCs) - The total number of culturable bacteria (per volume or area) in a given sample.
- Turbidity - The opacity of a liquid, e.g. cloudiness caused by a suspension of particles.

- Wholesome water - Water supplied for such domestic purposes as cooking, drinking, food preparation or washing; or supplied to premises in which food is produced.
- Windage - Water lost when wind forces an unusual flow pattern through the base of a cooling tower and blows droplets out of the tower.

Appendix 3: Guidance checklists for water systems (where applicable).

For every operation that is undertaken, a method statement needs to be prepared and followed to ensure the stages are completely safely and effectively. The suggested frequencies of inspecting and monitoring will depend on the complexity and the susceptibility of those likely to use the water, and are for guidance only. Risk assessment should define the frequency of inspection and monitoring depending on the type of use and user and particularly where there are adjustments made to take account of local needs.

Health and Safety Executive. HSG274 Legionnaires' disease – technical guidance. Part 2 Table 2.1 checklist.

Service: Calorifiers

Frequency: Annually, or as indicated by the rate of fouling.

- Inspect calorifier internally by removing the inspection hatch or using a boroscope 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.

Frequency: Annually, but may be increased as indicated by the risk assessment or result of inspection findings.

- 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.

Frequency: Monthly

- 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).

Service: Hot water services.

Frequency: Monthly

- 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).

- For circulating systems: take temperatures at return legs of principal loops (sentinel points) to confirm they are at a minimum of 50°C (55°C in healthcare premises). Temperature measurements may be taken on the surface of metallic pipework.

Frequency: Quarterly (ideally on a rolling monthly rota).

- For circulating systems: take temperatures at return legs of subordinate loops, temperature measurements can be taken on the surface of pipes, but where this is not practicable, the temperature of water from the last outlet on each loop may be measured and this should be greater than 50°C within one minute of running (55°C in healthcare premises). If the temperature rise is slow, it should be confirmed that the outlet is on a long leg and not that the flow and return has failed in that local area.

Frequency: Representative selection of other sentinel outlets considered on a rotational basis to ensure the whole system is reaching satisfactory temperatures for legionella control.

- 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 (55°C in healthcare premises) to create a temperature profile of the whole system

over a defined time period.

Service: POU water heaters (no greater than 15 litres).

Frequency: Monthly–six monthly, or as indicated by the risk assessment.

- Check water temperatures to confirm the heater operates at 50–60°C (55°C in healthcare premises) or check the installation has a high turnover.

Service: Combination water heaters.

Frequency: Annually

- 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.

Frequency: Monthly

- Check water temperatures at an outlet to confirm the heater operates at 50–60°C.

Service: Cold water tanks.

Frequency: Annually

- Inspect cold water storage tanks and carry out remedial work where necessary.

Frequency: Annually (Summer) or as indicated by the temperature profiling.

- 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.

Service: Cold water services.

Frequency: Monthly

- 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.

Frequency: Representative selection of other sentinel outlets considered on a rotational basis to ensure the whole system is reaching satisfactory temperatures for legionella control

- 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.

Frequency: Annually

- Check thermal insulation to ensure it is intact and consider weatherproofing where components are exposed to the outdoor environment.

Service: Showers and spray taps.

Frequency: Quarterly or as indicated by the rate of fouling or other risk factors, e.g. areas with high risk patients.

- Dismantle, clean and descale removable parts, heads, inserts and hoses where fitted.

Service: POU filters.

Frequency: According to manufacturer's guidelines

- Record the service start date and lifespan or end date and replace filters as recommended by the manufacturer (0.2 m 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).

Service: Base exchange softeners.

Frequency: Weekly, but depends on the size of the vessel and the rate of salt consumption.

- Visually check the salt levels and top up salt, if required. Undertake a hardness check to confirm operation of the softener.

Frequency: Annually, or according to manufacturer's guidelines.

- Service and disinfect

Service: Multiple use filters.

Frequency: According to manufacturer's guidelines.

- Backwash and regenerate as specified by the manufacturer

Service: Infrequently used outlets.

Frequency: Weekly, or as indicated by the risk assessment.

- Consideration should be given to removing infrequently used showers, taps and any associated equipment that uses water. If removed, any redundant supply pipework should be cut back as far as possible to a common supply (e.g. to the recirculating pipework or the pipework supplying a more frequently used upstream fitting) but preferably by removing the feeding 'T'. Infrequently used equipment within a water system (i.e. not used for a period equal to or greater than seven days) should be included on 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.

Service: TMV

Frequency: Annually or on a frequency defined by the risk assessment, taking account of any manufacturer's recommendations.

- 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.

Service: Expansion vessels.

Frequency: Monthly–six monthly, as indicated by the risk assessment.

- 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.

Health and Safety Executive. HSG274 Legionnaires' disease – technical guidance. Part 3 Appendix 6 checklist.

Service: Ultrasonic humidifiers/foggers and water misting systems

Frequency: Six monthly or according to manufacturer's instructions.

- If the equipment is fitted with UV lights, check to ensure the effectiveness of the lamp (check to see if

within working life) and clean filter.

Frequency: As part of machinery shut down.

- Ensure automatic purge of residual water is functioning.

Frequency: As indicated by risk assessment

- Clean and disinfect all wetted parts.
- Sampling for legionella.

Service: Spray humidifiers.

Frequency: Six monthly.

- Clean and disinfect spray humidifiers and make-up tanks, including all wetted surfaces, descaling as necessary.

Frequency: Weekly

- Confirm the operation of non-chemical water treatment (if present).

Service: Air washers, wet scrubbers, particle and trivial gas scrubbers.

Frequency: As indicated by risk assessment.

- Clean and disinfect air washers, wet scrubbers, particle and trivial gas scrubbers and water storage tanks.
- Apply, monitor, and record the results of the water treatment.

Service: Water softeners

Frequency: As recommended by manufacturer.

- Clean and disinfect resin and brine tank – check with the manufacturer what chemicals can be used to disinfect resin bed.

Service: Emergency showers, eyebaths and face-wash fountains.

Frequency: As indicated by risk assessment, but at least every six months.

- Flush through and purge to drain ensuring three to five times the volume of water in the stagnant zone is drawn off.

Frequency: Monthly

- Inspect water storage tanks (where fitted)

Frequency: Quarterly, or more frequently, as indicated by the risk assessment.

- Clean and disinfect shower heads, nozzles, roses, 'Y' strainers, and water storage tanks (where fitted)

Service: Sprinkler and hose reel systems.

Frequency: As directed.

- When witnessing tests of sprinkler blow-down and hose reels ensure that there is minimum risk of exposure to aerosols.

Service: Spa pools.

- Detailed HSE/PHE guidance on the management of spa pools is available in 'Management of spa pools: Controlling the risks of infection'.

Service: Whirlpool baths.

Frequency: As indicated by risk assessment.

- Clean, flush and disinfect air channels.
- Remove flush and clean jets.

Service: Horticultural misting systems.

Frequency: Quarterly or as indicated by risk assessment.

- Clean and disinfect distribution pipework, spray heads and make-up tanks including all wetted surfaces, descaling as necessary.

Service: Dental equipment.

Frequency: Twice daily (typically at the start and finish of each working day). Disinfectant contact time as recommended by the manufacturer.

- Drain down, clean, flush and disinfect all system components, pipework and bottles.

Frequency: Daily

- Clean storage bottles, rinse with distilled or Reverse Osmosis (RO) water, drain, and leave inverted overnight.

Frequency: As indicated by risk assessment.

- Take microbiological measurements – refer to 'Decontamination Health Technical Memorandum 01-05: Decontamination in primary care dental practices'.

Service: Vehicle wash systems.

Frequency: As indicated by risk assessment.

- Check and clean filtration systems, collection tanks and interceptor tanks and check treatment system.
- A biocide programme should be in place and should be monitored and controlled similar to the standards required in cooling towers.
- Clean and disinfect system and ensure sludge tanks are emptied.

Frequency: Initially to establish that control has been achieved and thereafter quarterly or as indicated by risk assessment.

- Sample for legionella.

Service: Fountains and water features.

Frequency: As indicated by the risk assessment, and depending on condition.

- Clean and disinfect ponds, spray heads and make-up tanks including all wetted surfaces, descaling as necessary.

Service: Industrial process water systems.

Frequency: Monitoring, inspection, and testing frequencies to be determined as indicated by the risk assessment.

- Conduct a risk assessment of each system, preferably using an assessment team comprising members knowledgeable in legionella management and control, as well as those familiar with the design and operation of the system.
- Devise a control scheme based on this risk assessment.

- Health Technical Memorandum 04-01: Safe water in healthcare premises: Part B: operational management table 1 checklist (adapted from HSG274 Part 2)

Service: Calorifiers

Frequency: Annually, or as indicated by the rate of fouling.

- Inspect calorifier internally by removing the inspection hatch or using a boroscope 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.

Frequency: Annually, but may be increased as indicated by the risk assessment or result of inspection findings.

- 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.

Frequency: Monthly

- 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).

Service: Hot water services.

Frequency: Monthly

- 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 55°C within one minute.
- For circulating systems: take temperatures at return legs of principal loops (sentinel points) to confirm they are at a minimum of 55°C. Temperature measurements may be taken on the surface of metallic pipework.

Frequency: Quarterly (ideally on a rolling monthly rota).

- For circulating systems: take temperatures at return legs of subordinate loops, temperature measurements can be taken on the surface of pipes, but where this is not practicable, the temperature of water from the last outlet on each loop may be measured and this should be greater than 55°C within one minute of running. If the temperature rise is slow, it should be confirmed that the outlet is on a long leg and not that the flow and return has failed in that local area.

Frequency: Representative selection of other sentinel outlets considered on a rotational basis to ensure the whole system is reaching satisfactory temperatures for legionella control.

- 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 55°C to create a temperature profile of the whole system over a defined time period.

Service: POU water heaters (no greater than 15 litres).

Frequency: Monthly–six monthly, or as indicated by the risk assessment.

- Check water temperatures to confirm the heater operates at 55°C or check the installation has a high turnover.

Service: Combination water heaters.

Frequency: Annually

- 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.

Frequency: Monthly

- Check water temperatures at an outlet to confirm the heater operates at 55°C.

Service: Cold water tanks.

Frequency: Annually

- Inspect cold water storage tanks and carry out remedial work where necessary.

Frequency: Annually (Summer) or as indicated by the temperature profiling.

- 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.

Service: Cold water services.

Frequency: Monthly

- 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.

Frequency: Representative selection of other sentinel outlets considered on a rotational basis to ensure the whole system is reaching satisfactory temperatures for legionella control

- 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.

Frequency: Annually

- Check thermal insulation to ensure it is intact and consider weatherproofing where components are exposed to the outdoor environment.

Service: Showers and spray taps.

Frequency: Quarterly or as indicated by the rate of fouling or other risk factors, e.g. areas with high risk patients.

- Dismantle, clean and descale removable parts, heads, inserts and hoses where fitted.

Service: POU filters.

Frequency: According to manufacturer's guidelines

- Record the service start date and lifespan or end date and replace filters as recommended by the manufacturer (bacterial-retention filters should be used primarily as a temporary control measure while a permanent solution is developed, although long-term use of such filters may be needed in some healthcare applications).

Service: Base exchange softeners.

Frequency: Weekly, but depends on the size of the vessel and the rate of salt consumption.

- Visually check the salt levels and top up salt, if required. Undertake a hardness check to confirm operation of the softener.

Frequency: Annually, or according to manufacturer's guidelines.

- Service and disinfect

Service: Multiple use filters.

Frequency: According to manufacturer's guidelines.

- Backwash and regenerate as specified by the manufacturer

Service: Infrequently used outlets.

Frequency: Weekly, or as indicated by the risk assessment.

- Consideration should be given to removing infrequently used showers, taps and any associated equipment that uses water. If removed, any redundant supply pipework should be cut back as far as possible to a common supply (e.g. to the recirculating pipework or the pipework supplying a more frequently used upstream fitting) but preferably by removing the feeding 'T'. Infrequently used equipment within a water system (i.e. not used for a period equal to or greater than seven days) should be included on 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.

Service: TMV

Frequency: Annually or on a frequency defined by the risk assessment, taking account of any manufacturer's recommendations.

- Where integral, 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.

Service: Inline strainers

Frequency: Annually or on a frequency defined by the risk assessment, taking account of any manufacturer's recommendations.

- Where fitted, inspect, clean, descale and disinfect any strainers or filters associated with TMVs or other sensitive equipment.

Service: Pressurisation and expansion vessels.

Frequency: Monthly–six monthly, as indicated by the risk assessment.

- Where practical, flush through and purge to drain.
- Where removable, bladders or diaphragms should be changed according to the manufacturer's guidelines or as indicated by the risk assessment.

Service: Biocidal treatment systems.

Frequency: Weekly

- Check the dosing and control system operation including alarms.
- Measure the treatment parameters to establish the required values are being achieved at representative outlets including sentinel outlets.

Frequency: Validation and calibration of the automatic monitoring system should be carried out at the frequencies recommended by the manufacturer.

- Consider 24-hour automatic monitoring for biocidal treatment on large or complex systems.

Assessor certificate



This certificate is awarded to

Callum Foskett

on successfully completing

Theoretical and Practical Risk Assessment of Hot and Cold Water Systems

The Control of Legionella Bacteria in Water System course is accredited
by City & Guilds

in association with

HSL Compliance



Adrian Walker
Technical Manager



Gavin Hartley
Chief Executive Officer

Date – 7th July 2023
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Legionella Control Association
KEEPING WATER SYSTEMS SAFE

Legionella Control Association

A Code of Conduct for Service Providers

Certificate of Registration

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

Name of Company: 4i Water Services Ltd

Registration Number: 2010/2125

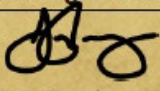
Registration under the following services categories:

- (1) Legionella Risk Assessment Services**
 - 1.1 Hot and Cold Water Systems Risk Assessment
 - 1.4 Healthcare Risk Assessment
- (2) Water Treatment Services**
 - 2.1 Hot and Cold Water Systems Water Treatment
 - 2.2 Evaporative Cooling Systems Water Treatment
- (3) Hot and Cold Water Monitoring and Inspection Services**
- (4) Cleaning and Disinfection Services**
 - 4.1 Hot and Cold Water Systems Cleaning and Disinfection
 - 4.2 Evaporative Cooling Systems Cleaning and Disinfection
 - 4.3 Process and Other Systems Cleaning and Disinfection
- (7) Legionella Monitoring Services**
 - 7.1 Sampling
 - 7.4 Interpretation of Analysis
- (8) Plant and Equipment Services**
 - 8.1 Design and Supply
 - 8.2 Installation
 - 8.3 Servicing/maintenance
 - 8.4 Refurbishment

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



WWS
THE WATER MANAGEMENT SOCIETY

Signed: 

Chairman, Executive Committee



Certificate Secretary



BCA
British Chemicals Association

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

Registered in England and Wales No. 8502723

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