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Legionella Risk Assessment

Site Details
This assessment has been carried out to demonstrate compliance with L8 Legionnaires' disease – The Control from legionella bacteria in water systems – Approved Code of Practice and guidance on regulations. *The purpose of this report is to provide an assessment of the risk to life from Legionella Bacteria in these premises, and, where appropriate, to make recommendations to ensure compliance with the relevant legionella legislation. The report does not address the risk to business continuity from a Legionella outbreak.* *This legionella risk assessment should be reviewed by a competent person by the date indicated below or at such earlier time as there is reason to suspect that it is no longer valid, or if there has been a significant change in the matters to which it relates, or if a legionella outbreak occurs.*

Site Photo	Site Address
	Wilton Town Council The Pavilion, Castle Lane Wilton SP2 0HG
Responsible person: Clare Churchill (Town Clerk)	Deputy: To be confirmed.
Date of Risk Assessment:	28/11/2024
Risk Assessment carried out by	Billy Fee
Risk Assessment report checked by	Yan Spink-Herman
Suggested date for review:	November 2025

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Introduction

We recently visited your premises at The Pavilion, Castle Lane, Wilton SP2 0HG to carry out a Legionella Risk Assessment as per the scope of works agreed during the booking process.

The aim of the survey is to assess the risk of Legionella bacteria contamination within your hot and cold water system. If present, hot & cold systems such as Cold water storage tanks, Hot water storage vessels, Water Heaters, Showers, Dead legs/ ends etc. will be covered in this assessment of Legionella risk. Please note that your risk assessment does not cover high risk systems such as Cooling towers (if present, but not disclosed), or others as noted in HSG274 – parts 1 and 3, excluding Dental Chairs (if present).

In order to achieve compliance, the actions recommended in this assessment must be undertaken. The assessment covers the building systems susceptible to colonization by legionella and which incorporate a potential means for creating and disseminating water droplets. The assessment covers both the routine operation and use of the system and also in relation to breakdown, abnormal operation, commissioning or unusual circumstances.

As a result of the assessment of legionella risk carried out at Wilton Town Council , Bison Assist recommends a risk assessment review to be carried out in November 2025.

Limitation

This assessment was carried out only on parts of the building that were disclosed and made accessible on the day.

We will not include in our report any water services in an area of the building which wasn't made available to our team. Please note that exclusion of these systems does not indicate absence. While we make every endeavour to ascertain the correct information regarding the site layout and system plant information, our consultant must rely on staff knowledge and any available system drawings. Lack of such knowledge or information may lead to assumptions on the part of the consultant. Please note that an accurate full schematic diagram does not form part of this risk assessment.

While every effort has been made to ensure the accuracy of the content of this document, Bison Assist Ltd will accept no responsibility for any omissions.

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About Your Risk Assessor

Your Legionella risk assessor was Billy Fee. They have successfully completed City & Guilds accredited courses “Risk Assessment for Legionella control in water systems WH004, Legionella and water hygiene control within hot and cold water systems HTM 04-01, as well as working towards the enhancement of personal skills and proficiency by completing 30+ hours of CPD per year.

All assessor risk assessments are reviewed, their competencies assessed regularly, and they have the necessary knowledge, training, experience, and competence to undertake the assessment of risk on smaller domestic type hot & cold water systems, on behalf of the appointed responsible person in your organisation.

Find out more about your assessor’s competencies and experience by emailing support@bisonassist.co.uk.

As your trusted partner in safety, here are some of the credentials held by Bison Assist.

Our credentials can be downloaded from our website.

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Legionella Management Goals

Goal 1 - Risk Assessment: About Your Report	Goal 2 - Action Plan: Next Steps	Goal 3 – Review: Legal Requirements
A risk assessment is typically the starting point on your journey to improved Legionella control, this should contribute to a more comprehensive plan for the effective management and control of the water systems within your premises. Here is how we completed your risk assessment: • Through visual inspection; • Observation of existing policies, procedures, records, and other relevant documentation; • By gathering knowledge from members of your team, whilst we were on site.	Within the report, you will find an Action Plan section. It's vital that this is understood and implemented. Some of these actions may be achieved in-house, by your responsible person or a member of your team, others will need to be carried out by specialists with the relevant qualifications, skills and competence. On receipt of this document, should you have any queries or would like any further assistance or advice, please do not hesitate to contact our Support team at support@bisonassist.co.uk. Please remember, the risk assessment is the beginning of the journey, not the end. The Health and Safety Executive warns: *"A risk assessment is only effective if you and your staff act on it. You must follow through with any actions required and review it on a regular basis".*	Risk management should always remain effective. Some risks that are "very low" today, may increase over time. The assessment should be reviewed regularly and, specifically when there is a reason to suspect that it is no longer valid. An indication of when to review the assessment and what needs to be reviewed should be recorded. This may result from, for example: • Changes to the water system or its use; • Changes to the use of the building in which the water system is installed; • The availability of new technology or information about risks or control measures; • The results of checks indicating that control measures are no longer effective; • Change of key personnel; • A case of Legionnaires' disease / Legionellosis associated with the system.

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Legislation

It is a legal requirement for every employer to conduct an assessment of the health and safety risks, arising out of their work activity. Under Regulation 3 of the Management of Health and Safety at Work Regulations 1999, the purpose of such assessment is to identify what needs to be done in order to control health and safety risks. Further applicable legislation to Legionella Safety has been listed in table 1.0 – Applicable Legislation, below.

Statutory legislation applicable to your business: (Not limited to the legislation listed below)
• Health & Safety at Work Act 1974
• Management of Health & Safety at Work Regulations 1999
• Corporate Manslaughter and Corporate Homicide Act 2007
• Health & Safety (Consultation with Employees) Regulations 1996
• Control of Substances Hazardous to Health (COSHH) Regulations 2002
• The Water Supply (Water Fittings) Regulations 1999
• The Water Supply (Water Quality) Regulations 2018
• Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) 2013
• The Provision and Use of Work Equipment Regulations 1998
Non-Statutory legislation applicable to your business: (Not limited to the legislation listed below)
• The Approved Code of Practice (ACOP) L8 (4th Edition) 2013 - Legionnaires' disease. The control of legionella bacteria in water systems
• HSG 274 Part 2 (2014): The control of legionella bacteria in hot and cold water systems
• INDG 458 (2012): Legionnaires' disease. A brief guide for duty holders

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Executive Summary	
Property & People	The property is primarily used as a changing facility and typically operates 7 days a week. The property can accommodate 50 visitors/contractors and 1 staff on an average day. The building does not use evaporative cooling and no other external aerosol generation was seen; the focus of this Risk Assessment will therefore be to identify the legionella risks posed by the internal domestic system which are not expected to impact beyond the curtilage of the property. Legionnaires' disease is a potentially fatal form of pneumonia although everyone is potentially susceptible to infection, there are a number of factors that increase susceptibility, including increasing age (particularly Males over 50 years); those with existing respiratory diseases or certain illnesses and conditions such as cancer, diabetes, kidney disease; alcoholics; smokers; and at a much greater risk are those with impaired immune systems. The potentially susceptible individuals include children (low risk) and staff, visitors and contractors (medium risk). Accordingly, we consider potentially susceptible individuals to have a Low to Medium susceptibility to legionnaires disease.
Water Systems	The water system, detailed in the report, briefly comprises of the following: Incoming cold-water mains and stop tap located in the kitchen and 2 Calorifiers feeding hot water outlets.
Inherent risk	The inherent risk (sometimes referred to as the design risk) is an assessment of the risk without control measures in place (worst case). The inherent risk of the cold water systems on this site is assessed as – LOW - as the system is mains fed without significant storage (e.g. no CWST) but with aerosol generation (e.g. showers) the risk of harm is relatively unlikely. The inherent risk of the hot water systems on this site is assessed as – HIGH - with stored hot water (e.g. calorifier) and aerosol generation (e.g. showers) it is likely that this system could cause harm

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LR - Legionella Risk Ratings

Our risk rating system is used to prioritise corrective actions relating directly to better Legionella control. We do not use a scoring system as in our view 'averaging' the residual risk to a single level tends to hide individual matters of concern that need addressing.

The HAZARD (Legionella) is always rated as serious since a fatality is a possible outcome. The risk is simply presented as the assessors estimate of likelihood.

The current design & control systems in place are presented against a risk rating based on the assessor's overview of: -

- Contamination. An evaluation of the risk of supply.
- Amplification. Assessment of the likelihood that Legionella will proliferate.
- Transmission. Whether droplets or aerosols are likely to be produced.
- Exposure. Potential for aerosols to be inhaled.
- Susceptibility. Consideration of the exposed population.

Failure of the current control measures will result in the water system reverting to the water systems inherent risk, this is likely to be a far higher risk rating.

Insignificant	• LIKELIHOOD (Very Low) = RISK (Minimal) • No additional action required.
Low	• LIKELIHOOD (Low) = RISK (Slight risk under abnormal operating conditions) • Take actions when other more significant risks have been completed.
Medium	• LIKELIHOOD (Possible) = RISK (Possible risk with existing operating conditions) • Take actions when operationally practicable, time periods often programmed to fit with shutdowns or planned maintenance.
High	• LIKELIHOOD (Present) = RISK (Probable risk with existing operating conditions) • Take actions as soon as possible, time periods are typically a few months maximum.
Imminent	• LIKELIHOOD (High) = RISK (Imminent risk of harm or loss) • Take immediate action to reduce the risk, this may include taking systems offline.

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GR - General Risk Ratings

GR - General Risk Rating has been used to prioritise corrective actions relating to general safety concerns, such as working at heights, or scalding risks pointed out under our duty of care.

We as a service provider are unable to define exact time scales for corrective action as this is dependent on any other risks within your organisation and the budget available for corrective actions. A programme of implementation should be devised.

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Action Plan

The remedial actions table highlights the issues identified during the assessment of Legionella risk. It is highly recommended the actions priority is followed – refer to Risk Assessment Rating section above.

Once the actions have been completed, these are required to be confirmed through signature by the designated responsible person.
Completion of the actions in this section would result in the Legionella control system operating at **ALARP** (As Low As Reasonably Practicable), in the view of the assessor.

Action	Residual risk	Completion date	Completed by
Formally record the statutory Duty Holder, Responsible Person, Named Deputy and those with Legionella control tasks in the allocation of responsibilities details.	**MEDIUM = Take actions when operationally practicable**		
Allocate all the missing tasks using the list of regular monitoring and inspection tasks produced in the control measures section of this assessment	**MEDIUM = Take actions when operationally practicable**		
Consider how the Responsible Person would demonstrate they have Legionella understanding and are competent. Assessed training with certification is often the first step.	**HIGH = Take actions as soon as possible**		

Those who are appointed to carry out Legionella control measures and strategies should be suitably informed, instructed and trained and their suitability assessed. Staff should be properly trained to a standard which ensures that tasks are carried out in a safe, technically competent manner.	**HIGH = Take actions as soon as possible**		
Ensure that the risk assessment review process is defined and that change to water systems, management or conditions drives a risk assessment review.	**HIGH = Take actions as soon as possible**		
The duty holder has the duty to ensure that Legionella Risk Assessments are carried out regularly by competent contractors	**HIGH = Take actions as soon as possible**		
Find or produce an up to date drawing or diagram showing the layout of the plant including out of use equipment; strainers; pumps and primary control valves along with outlets served.	**LOW = Take actions when other more significant risks have been completed**		
Produce routine monitoring and inspection procedures these should define sampling locations,	**LOW = Take actions when other more**		

test methods and frequencies, and ensure consistency e.g calibration requirements.	**significant risks have been completed**		
Obtain or write method statements for task to be completed. For example, cleaning and disinfection works, specifying disinfection concentration, contact times, circulation and flushing requirements. (Method statements should reflect the complexity of the task & systems).	**MEDIUM = Take actions when operationally practicable**		
The site management structure and contact details need to be recorded	**MEDIUM = Take actions when operationally practicable**		
Add a process to the written scheme to control third parties supplying and operating equipment with the potential to create or disseminate Legionella on the premises. (e.g. Pressure washers).	**LOW = Take actions when other more significant risks have been completed**		
Conduct a system review or re-assess the water systems to identify route causes of poor performance and define proposed corrective actions, changes to the control scheme.	**MEDIUM = Take actions when operationally practicable**		

Ensure that out of specification results bring about corrective actions within reasonable time frames and that the actions taken resolve the issue.	**MEDIUM = Take actions when operationally practicable**		

Ensure that all Legionella monitoring records are available and held for at least five years.	**MEDIUM = Take actions when operationally practicable**		

All corrective actions should be completed and recorded.	**MEDIUM = Take actions when operationally practicable**		

Ensure that any significant positive Legionella results have an action logged and are followed up with resampling.	**MEDIUM = Take actions when operationally practicable**		

Quick fill connections are designed to be removed and should not be left connected	**LOW = Take actions when other more significant risks have been completed**		
Label designated drinking water outlets.	**LOW = Take actions when other more significant risks have been completed**		
Consider replacing spray taps/inserts with units that create minimal aerosols (See asset register).	**MEDIUM = Take actions when operationally practicable**		
Little used outlets identified in the asset register need regular (weekly) flushing.	**LOW = Take actions when other more significant risks have been completed**		
Outlets were below the minimum hot temperature of 50°C (55°C in healthcare) consider possible causes and take corrective actions. (any hot outlets	**LOW = Take actions when other more**		

operating above 55°C should be assessed for scald risk)	**significant risks have been completed**		
Check the temperature of sentinel locations (asset register) and record in the logbook.	**MEDIUM = Take actions when operationally practicable**		
Check the temperature of all locations with outlets (asset register) over the course of a year and record in the logbook.	**MEDIUM = Take actions when operationally practicable**		
Risk assess whether the TMV fitting is required, and if not, then 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 manufacturer's instructions.	**MEDIUM = Take actions when operationally practicable**		
When outlets are not in regular use, weekly flushing of these devices for several minutes can	**HIGH = Take actions as soon as possible**		

significantly reduce the number of legionella discharged from the outlet. Once started, this procedure has to be sustained and logged, as lapses can result in a critical increase in legionella at the outlet.			
Dismantle, clean and descale removable parts, heads, inserts and hoses where fitted. Quarterly or as indicated by the rate of fouling.	**HIGH = Take actions as soon as possible**		
The water heater appears over sized. Water turnover needs to be established and if not adequate, steps taken to reduce storage or improve turnover	**HIGH = Take actions as soon as possible**		
A drain valve in the cold feed will not allow debris in the base of the vessel to be purged to drain. To meet HSG 274 Part 2 guidance a drain should be installed in the base of the vessel	**LOW = Take actions when other more significant risks have been completed**		

Investigate issues/Adjust Thermostats to ensure the water heater outlet temperature is at 60°C	**HIGH = Take actions as soon as possible**		
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, ideally 55°C). (HSG274 Table 2.1)	**MEDIUM = Take actions when operationally practicable**		
Confirm if an inspection hatch has been fitted. If none is present any debris in the base of the water heater should be purged to a suitable drain. Annually but may be increased as indicated by the risk assessment or result of inspection findings	**MEDIUM = Take actions when operationally practicable**		
It may improve ease of monitoring to fit a temperature gauge on the outlet and return pipes.	**LOW = Take actions when other more significant risks have been completed**		

The HWSV (calorifier) and main valves need to be labelled with asset numbers to allow them to be clearly identified	**LOW = Take actions when other more significant risks have been completed**		

Consider installing an isolating & drain valve to the expansion vessel supply	**MEDIUM = Take actions when operationally practicable**		

Isolate and purge to drain expansion vessels several times, to flush through. If the water held in the vessel is warm then monthly flushing is required, in lower risk situations where the water held in the vessel is cold six-monthly or annual flushing may be acceptable.	**LOW = Take actions when other more significant risks have been completed**		

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Assessment of Legionella Risk

1. MANAGEMENT & RECORDS		
QUESTION	**ANSWER**	**GUIDANCE / ACTION RECOMMENDED**
Statutory Duty Holder (Organisation):	Wilton Town Council	
Legionella Responsible Person (full name, title):	Clare Churchill (Town Clerk)	
Legionella Deputy Person (full name, title):	To be confirmed.	

Have the above persons been appointed in writing?	No	*Formally record the statutory duty holder, Responsible Person, Deputy and those with Legionella control tasks in the allocation of responsibilities details.*
Residual Risk:	**MEDIUM = Take actions when operationally practicable**	

Is the allocation of tasks comprehensive?	No – No supporting evidence provided to the assessor during the assessment	*ACoP L8:2013 Para 53 States - Supervise everyone involved in any related operational procedure properly. Define staff responsibilities and lines of communication properly and document them clearly.* *Allocate all the missing tasks using the list of regular monitoring and inspection tasks produced in the control measures section of this assessment*
Residual Risk:	**MEDIUM = Take actions when operationally practicable**	

Is the responsible person competent or do they have access to competent help?	No – There is no evidence the RP is Legionella competent	*Consider how the Responsible Person would demonstrate they have Legionella understanding and are competent. Assessed training with certification is often the first step. A specialist provider could be used to provide legionella management training.*
Residual Risk:	**HIGH = Take actions as soon as possible**	

Is staff Legionella competence adequate for tasks conducted (training recorded)?	No - No supporting evidence provided to the assessor during the assessment	*Those who are appointed to carry out Legionella control measures and strategies should be suitably informed, instructed and trained and their suitability assessed. Staff should be properly trained to a standard which ensures that tasks are carried out in a safe, technically competent manner.*
Residual Risk:	**HIGH = Take actions as soon as possible**	

Has an external Facilities, Maintenance or Water Hygiene service provider been appointed for Legionella control?	No	
Is there a system to ensure assessments are reviewed regularly or due to change?	No – No assessment review process	*Ensure that the risk assessment review process is defined and that change to water systems, management or conditions drives a risk assessment review*
Residual Risk:	**HIGH = Take actions as soon as possible**	

Have the significant findings of previous Legionella Risk Assessments been carried out?	No - No supporting evidence provided to the assessor during the assessment	*The duty holder has the duty to ensure that Legionella Risk Assessments are carried out regularly by competent contractors*
Residual Risk:	**HIGH = Take actions as soon as possible**	

Is there an up-to-date schematic diagram of the water system on record?	No up to date schematic diagrams were found	*Find or produce an up to date drawing or diagram showing the layout of the plant including out of use equipment; strainers; pumps and primary control valves along with outlets served.*
Residual Risk:	**LOW = Take actions when other more significant risks have been completed**	

Is there an up-to-date asset (outlet) register of the water system on record?	No - Asset register to be provided in this assessment	

Is a Legionella Written Scheme of Control in date and available for inspection?	Yes	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Photo of written scheme of control for Legionella: 

Does the written scheme include a description of correct and safe operation (e.g. Start up and shutdown and precautions to be taken)?	Yes – Simple water systems	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Does the written scheme include details on test locations, frequencies, methods, calibration and control limits?	No – Corrective actions are not well defined	*Obtain or write correct operating procedures for each water system on site. Including commissioning, start up after lack of use, shutdown, correct operating, and maintenance manuals.*
Residual Risk:	**LOW = Take actions when other more significant risks have been completed**	

Does the written scheme include details on remedial measures to take if results exceed control limits?	Yes – Corrective actions defined	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Does the written scheme include suitable method statements (Including cleaning and disinfection)?	No – Method statements are not complete	*Obtain or write method statements for task to be completed. For example, cleaning and disinfection works, specifying disinfection concentration, contact times, circulation and flushing requirements. (Method statements should reflect the complexity of the task & systems).*
Residual Risk:	**MEDIUM = Take actions when operationally practicable**	

Does the written scheme include an action plan for emergency conditions (Legionella positive / outbreak)?	Yes – Legionella positive action plan in place	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Does the written scheme include a requirement to control any (potentially high risk) equipment brought onto site by third parties (e.g. Pressure washers)?	No	*Add a process to the written scheme to control third parties supplying and operating equipment with the potential to create or disseminate Legionella on the premises. (e.g. Pressure washers).*
Residual Risk:	**LOW = Take actions when other more significant risks have been completed**	

Do records show clear and up to date lines of communication?	No – There is no recorded management structure	*The site management structure and contact details need to be recorded*
Residual Risk:	**MEDIUM = Take actions when operationally practicable**	

Do historic records indicate the current control measures are effective?	No - No supporting evidence provided to the assessor during the assessment	*Conduct a system review or re-assess the water systems to identify route causes of poor performance and define proposed corrective actions, changes to the control scheme.*
Residual Risk:	**MEDIUM = Take actions when operationally practicable**	

Do historic maintenance records show corrective actions are completed in a timely manner and effective?	No - No supporting evidence provided to the assessor during the assessment	*Ensure that out of specification results bring about corrective actions within reasonable time frames and that the actions taken resolve the issue.*
Residual Risk:	**MEDIUM = Take actions when operationally practicable**	

Are monitoring and inspection records complete and available for at least 5 years?	No - No supporting evidence provided to the assessor during the assessment	*Ensure that all Legionella monitoring records are available and held for at least five years.*
Residual Risk:	**MEDIUM = Take actions when operationally practicable**	

Is there evidence of non-conformity control?	No - No supporting evidence provided to the assessor during the assessment	*All corrective actions should be completed and recorded.*
Residual Risk:	**MEDIUM = Take actions when operationally practicable**	

Do technical difficulties require the use of alternative (to temperature) methods for legionella control?	No	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Is microbiological (legionella) water sampling carried our regularly (with locations and frequencies defined)?	Yes - Legionella testing/sampling carried out during this assessment	
Residual Risk:	**INSIGNIFICANT = No additional action required**	
Location of Legionella water sample:	Kitchen	
Location of other water sample(s) (e.g. Pseudomonas Aeruginosa):	Referees Room	

Are previous Legionella water sampling results within limits?	No - No supporting evidence provided to the assessor during the assessment	*Ensure that any significant positive Legionella results have an action logged and are followed up with resampling.*
Residual Risk:	**MEDIUM = Take actions when operationally practicable**	

Legionella Management – Any matters of concern (Outside of scope)?	No matters of concern outside the assessment scope identified	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Legionella Assessment – Were there any limitations during site visit (such as limited access, lack of assistance, records unavailable)?	No assessment limitations all survey information obtained	

2. COLD WATER STORAGE TANK(S)		
QUESTION	**ANSWER**	**GUIDANCE / ACTION RECOMMENDED**
Have any cold water storage tanks been identified on site?	No	

3. STORED COLD & HOT WATER		
QUESTION	**ANSWER**	**GUIDANCE / ACTION RECOMMENDED**
Location of incoming mains isolation (stop tap)?	Kitchen	
Every water fitting through which water is supplied should be installed in such a manner that no backflow of fluid from any appliance, fitting or process can take place. (Water regulations guide Schedule 2 Section 6.4 G15.1) Is there backflow protection for the following outlets?		
Are shower hoses long enough to be submerged or reach the floor?	No – shower hoses do not reach the floor	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Mains fed external/ garden bib taps inc. wash down hoses	Bib tap/hose present with backflow protection	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Quick fill connections (Heating - filling loop)	Quick fill connections in place	*Quick fill connections are designed to be removed and should not be left connected.*
Residual Risk:	**LOW = Take actions when other more significant risks have been completed**	

Washing machines & Dishwashers	None seen	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Treatment plant Softeners & Reverse Osmosis (RO)	None seen	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Fire hoses	None seen	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Are materials seen WRAS/WRc compliant?	No suspect materials were seen	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Have drinking water identification signs/ labels been used?	No labels seen	*Label designated drinking water outlets. The Water Regulations Advisory Scheme (WRAS) formal DETR guidance on the water supply (Water Fittings) Regulations 1999 requires non-wholesome water to be labelled not drinking water. Industry guidance indicates this can be achieved by labelling drinking water outlets.(G27.4).*
Residual Risk:	**LOW = Take actions when other more significant risks have been completed**	

Are there any drinking water outlets in unsatisfactory locations (toilets or workshops)?	None found	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Is access reasonable for inspection of pipes?	Access to components and pipework is acceptable for the type of premises	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Is distribution pipework insulated and likely to operate below 20°C?	Yes – Good temperatures found	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Are unnecessary aerosols produced (e.g. spray taps on TMVs)?	Yes – Spray inserts found (see the asset register)	*Consider replacing spray taps/inserts with units that create minimal aerosols (See asset register).*
Residual Risk:	**MEDIUM = Take actions when operationally practicable**	

Are all outlets in regular use?	No - Use is unknown / low (see the asset register)	*Little used outlets identified in the asset register need regular (weekly) flushing. The risk from legionella growing in peripheral parts of the domestic water system, such as dead legs off the recirculating hot water system, may be minimised by regular use of these outlets. When outlets are not in regular use, weekly flushing of these devices for several minutes can significantly reduce the risk of legionella proliferation in the system. Once started, this procedure has to be sustained and logged, as lapses can result in a critical increase in legionella at the outlet. Where there are high-risk populations, eg healthcare and care homes, more frequent flushing may be required as indicated by the risk assessment. (HSG 274 2.78)*
Residual Risk:	**LOW = Take actions when other more significant risks have been completed**	

Are outlets clean and free from scale and slime?	Yes – Outlets appear clean	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Is the hot & cold water distribution system free from dead ends?	No dead ends observed	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Do all parts of the hot water distribution system (including returns) operate above 50°C (55°C for healthcare premises)?	No – Poor temperatures found (see the asset register)	*Outlets were below the minimum hot temperature of 50°C (55°C in healthcare) consider possible causes and take corrective actions. (any hot outlets operating above 55°C should be assessed for scald risk)*
Residual Risk:	**LOW = Take actions when other more significant risks have been completed**	

Are sentinel temperature monitoring locations correct and checked?	No	*Check the temperature of sentinel locations (asset register) and record in the logbook.*
Residual Risk:	**MEDIUM = Take actions when operationally practicable**	

Is a temperature profiling schedule (representative outlets) defined and in operation?	No	*Check the temperature of all locations with outlets (asset register) over the course of a year and record in the logbook.*

Residual Risk:	**MEDIUM = Take actions when operationally practicable**	

Are TMVs listed and maintained as required?	No – No service record seen	*Risk assess whether the TMV fitting is required, and if not, then 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 manufacturer's instructions.*
Residual Risk:	**MEDIUM = Take actions when operationally practicable**	

Are infrequently used outlets listed and flushed?	No – No record seen	*When outlets are not in regular use, weekly flushing of these devices for several minutes can significantly reduce the number of legionella discharged from the outlet. Once started, this procedure has to be sustained and logged, as lapses can result in a critical increase in legionella at the outlet.*
Residual Risk:	**HIGH = Take actions as soon as possible**	

Are showers listed and cleaned and disinfected?	No – No service record seen	*Dismantle, clean and descale removable parts, heads, inserts and hoses where fitted. Quarterly or as indicated by the rate of fouling.*
Residual Risk:	**HIGH = Take actions as soon as possible**	

4. HOT WATER STORAGE VESSEL(S) (CALORIFIERS)		
QUESTION	**ANSWER**	**GUIDANCE / ACTION RECOMMENDED**
Have any hot water storage vessels (calorifiers) been identified on site?	Yes	
Number of HWSV(s):	2	
Is there safe access provided to inspect and/or clean the HWSV(s), where applicable?	Yes - Access is somewhat limited due to the location but possible	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

External Photo of the hot water storage vessel(s)

Location(s):	Boiler Cupboard	
Hot water storage vessel(s) model/type and heating method?	Unvented - Direct with Immersion(s)	
HWSV(s) capacity (Volume)?	300L	
HWSV(s) orientation and material?	Vertical stainless steel vessel	
Locations/Areas supplied:	All outlets	
Can the HWSV be internally inspected?	There is no access for internal inspection.	*Confirm if an inspection hatch has been fitted. If none is present any debris in the base of the water heater should be purged to a suitable drain. Annually but may be increased as indicated by the risk assessment or result of inspection findings*
Residual Risk:	**MEDIUM = Take actions when operationally practicable**	

Are there details on the internal condition of HWSV?	No – internal inspections are not considered reasonable (simple domestic hot water system)	*In theory HSG274 guidance is to conduct an annual internal inspection of a calorifier (HWSV). Typically this type of calorifier (HWSV) will only be inspected/replaced if it fails to perform*
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Is the HWSV required (Not over-sized)?	No – The HWSV is estimated as over capacity	*The water heater appears over sized. Water turnover needs to be established and if not adequate, steps taken to reduce storage or improve turnover.*
Residual Risk:	**HIGH = Take actions as soon as possible**	

Is the HWSV fitted with a suitable temperature / pressure safety release system?	Yes	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Is the HWSV fitted with a drain valve in the base of the unit?	Drain valve in the cold feed	*A drain valve in the cold feed will not allow debris in the base of the vessel to be purged to drain. To meet HSG 274 Part 2 guidance a drain should be installed in the base of the vessel*
Residual Risk:	**LOW = Take actions when other more significant risks have been completed**	

Is the HWSV linked or is stagnation likely?	Unknown due to limited access	
Residual Risk:	**MEDIUM = Take actions when operationally practicable**	

Is the HWSV & local pipes sufficiently well insulated?	Yes – Well insulated	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Are there any dead ends, long gauge feeds or dead legs associated with the HWSV?	No	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Are there isolating valves on the HWSV inlet and outlets?	Yes - Inlet and outlet valves	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

HWSV outlet temperature?	48.3	
Is the outlet temperature of the HWSV satisfactory?	No	*Investigate issues/Adjust Thermostats to ensure the water heater outlet temperature is at 60°C.*
Residual Risk:	**HIGH = Take actions as soon as possible**	

Is the hot water return temperature from principle loops satisfactory?	No hot water return	

Residual Risk:	**INSIGNIFICANT = No additional action required**	

Are HWSV flow and return temperatures checked monthly?	No	*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, ideally 55°C). (HSG274 Table 2.1)*
Residual Risk:	**MEDIUM = Take actions when operationally practicable**	

Will temperatures reach target throughout the vessel for at least 1 hour daily?	Yes – Immersion heaters in the base of the vessel	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Are Temperature Gauges/Thermometer pockets fitted?	No	*It may improve ease of monitoring to fit a temperature gauge on the outlet and return pipes.*
Residual Risk:	**LOW = Take actions when other more significant risks have been completed**	

Are the valves and HWSV labelled?	No	*Stop valves, servicing valves and drain taps should be labelled so that the parts of the system which they control can be determined for maintenance purposes. (WRAS G4.10)* *The HWSV (calorifier) and main valves need to be labelled with asset numbers to allow them to be clearly identified*
Residual Risk:	**LOW = Take actions when other more significant risks have been completed**	

If the HWSV is direct mains fed (>15 ltrs), is the supply fitted with a check valve & expansion vessel?	Yes - Check valve and expansion vessel in place	
Residual Risk:	**INSIGNIFICANT = No additional action required**	
Is the HWSV fitted with a suitable temperature / pressure safety release system?	Yes	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

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5. EXPANSION VESSELS		
QUESTION	**ANSWER**	**GUIDANCE / ACTION RECOMMENDED**
Are any Expansion vessels present?	Yes	
Photo of expansion vessel: 		

Is the expansion vessel fitted with an isolating and drain valve?	No – Valves missing	*To minimise the risk of microbial growth, expansion vessels should be installed - with an isolation and drain valve to aid flushing and sampling. (HSG 274 Para 2.39)* *Consider installing an isolating & drain valve to the expansion vessel supply*
Residual Risk:	**MEDIUM = Take actions when operationally practicable**	

Is the size of expansion vessel appropriate (capacity)?	Yes – Appears reasonable	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Is the expansion vessel correctly installed?	Yes	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

Is the water temperature in the expansion vessel likely to rise?	No	

Residual Risk:	**INSIGNIFICANT = No additional action required**

Is the expansion vessel designed to stimulate flow through the unit?	No – Standard vessel	*Isolate and purge to drain expansion vessels several times, to flush through. If the water held in the vessel is warm then monthly flushing is required, in lower risk situations where the water held in the vessel is cold six-monthly or annual flushing may be acceptable. To minimise the risk of microbial growth, expansion vessels should be installed - designed to stimulate flow within the vessel. (HSG 274 Para 2.39)*
Residual Risk:	**LOW = Take actions when other more significant risks have been completed**	

6. LOCAL WATER HEATER <15ltr (POU)		
QUESTION	**ANSWER**	**GUIDANCE / ACTION RECOMMENDED**
Are there any point of use water heaters present?	No	

7. OTHER WATER SYSTEMS		
QUESTION	**ANSWER**	**GUIDANCE / ACTION RECOMMENDED**
Have any fire hose reels been identified on site?	No	
Have any wet fire sprinkler systems been identified on site?	No	
Residual Risk:	**INSIGNIFICANT = No additional action required**	

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LEGIONELLA CONTROL MEASURES

Based on the risk assessment visit, the following legionella control measures are to be implemented:

HOT WATER SERVICES - take temperatures at sentinel points and a representative selection of other points. Minimum 50 °C (55 °C in healthcare) within one minute.
FREQUENCY - Monthly.

COLD WATER SERVICES - take temperatures at sentinel points and a representative selection of other points. Below 20 °C within two minutes.
FREQUENCY - Monthly.

CALORIFIER - where practical inspect internally using inspection hatch or using a borescope.
FREQUENCY - Annually.

CALORIFIER - check flow temperatures (as close to 60 °C as practicable without going below 60 °C)
FREQUENCY - Monthly.
If present (see report) check return temperatures (ideally 55 °C but not below 50 °C).
FREQUENCY - Monthly.

SPRAY TAPS/SHOWERS - dismantle/clean and descale removable parts/heads/inserts and hoses where fitted.
FREQUENCY - Quarterly.

TMVS - to maintain protection against scald risk TMVs require routine maintenance carried out by a competent person.
FREQUENCY - Annually.

INFREQUENTLY USED OUTLETS - regularly flush to waste the outlets to minimise the risk from microbial growth in the peripheral parts of the water system.
FREQUENCY - Weekly.

EXPANSION VESSELS - Where practical flush through.
FREQUENCY - Monthly.

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ADDITIONAL INFORMATION	
QUESTION	**ANSWER**
Observations:	Limited documentation, in the form of policies and records were found during this assessment. A scheme of control was observed however requires improvement. Hot water temperatures did not consistently meet the threshold of 50° throughout the property. The client stated that the building is sporadically used depending on bookings and may go a couple of weeks with no or limited usage. The boilers must be turned on beforehand to heat the water, so it is possible for stagnation to occur. Consideration should be given to alternative options with regards to the hot water system as it appears as though these HWSVs are grossly oversized. It was advised that the cleaner completes descaling, flushing and temperature checks but no records were observed of such.

Sentinel point 1:	Referees Room
Sentinel point 2:	Kitchen

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ASSET / OUTLET TABLE

The asset register below only includes areas accessible at the time of the visit:

Floor	Location	Asset(s)	Number of sinks in room	Cold Water Temperature	Hot Water Temperature	TMV / TMT Outlet Temperature	Infrequently Used Outlets	Dead Legs / Ends	Condition/ Comments
Ground	Kitchen	Basin(s),Sentinel 2	1	9.9	50.8	-	Yes	No	Outlet(s) in good condition with no scale build up.
Ground	DAA WC	Basin with TMT,Toilet(s)	1	10.8	48.6	44.6	Yes	No	Outlet(s) in good condition with no scale build up.
Ground	Toilet	Basin(s),Toilet(s)	1	10.2	49.3	-	Yes	No	Outlet(s) in good condition with no scale build up.,Includes spray insert
Ground	Referees Room	Basin(s),Shower Enclosure,Toilet(s),Sentinel 1	1	10.2	49.8	-	Yes	No	Outlet(s) in good condition with no scale build up.,Includes spray insert
Ground	Toilet 2	Basin(s),Toilet(s)	1	9.8	50.3	-	Yes	No	Outlet(s) in good condition with no scale build up.,Includes spray insert
Ground	Home	Basin(s),Shower Enclosure,Toilet(s)	1	10.2	47.6	-	Yes	No	Outlet(s) in good condition with no scale build up.,Includes spray insert

Ground	Away	Basin(s),Shower Enclosure,Toilet(s)	1	10.6	49.2	-	Yes	No	Outlet(s) in good condition with no scale build up.,Includes spray insert

Ground	Boiler Cupboard	Hot Water Storage Vessel x 2	0	-	-	-	No	No	No outlets

Glossary

Aerosol - *a suspension in a gaseous medium of solid particles, liquid particles or solid and liquid particles having a negligible falling velocity. In the context of this document, it is a suspension of particles which may contain legionella with a typical droplet size of <5 µm that can be inhaled deep into the lungs.*

Bacteria - *(singular bacterium) a microscopic, unicellular (or more rarely multicellular) organism.*

Biocide *a substance which kills microorganisms*

Biofilm *a community of bacteria and other microorganisms embedded in a protective layer with entrained debris, attached to a surface.*

Calorifier *an apparatus used for the transfer of heat to water in a vessel, the source of heat being contained within a pipe or coil immersed in the water.*

Chlorine *an element used as a biocide and for disinfection*

Cold water service *installation of plant, pipes and fitting in which cold water is stored, distributed and subsequently discharged.*

Dead end/blind end *a length of pipe closed at one end through which no water passes.*

Dead leg *a length of water system pipework leading to a fitting through which water only passes infrequently when there is draw off from the fitting, providing the potential for stagnation. Disinfection the reduction of the number of microorganisms to safe levels by either chemical or non-chemical means (eg biocides, heat or radiation)*

Domestic water *hot and cold water intended for drinking, washing, cooking, food preparation or other domestic purposes.*

Hot water service *installation of plant, pipes and fittings in which water is heated, distributed and subsequently discharged (not including cold water feed tank or cistern).*

Legionnaires' disease *a form of pneumonia caused by bacteria of the genus legionella.*

Legionella (plural legionellae) *a bacterium (or bacteria) of the genus legionella.*

Legionellosis *any illness caused by exposure to legionella.*

Microorganism *an organism of microscopic size, including bacteria, fungi and viruses.*

Nutrient *a food source for microorganisms.*

Point of use (pou) filters *a filter with a maximal pore size of 0.2 µm applied at the outlet, which removes bacteria from the water flow.*

Risk assessment *identifying and assessing the risk from legionellosis from work activities and water sources on premises and determining any necessary precautionary measures.*

Sentinel taps for hot water services *– the first and last taps on a recirculating system. For cold water systems (or non-recirculating hws), the nearest and furthest taps from the storage tank. The choice of sentinel taps may also include other taps which represent parts of the recirculating system where monitoring can aid control.*

Sero-group *a sub-group of the main species.*

Shunt pump *a circulation pump fitted to hot water service/plant to overcome the temperature stratification of the stored water.*

Slime *a mucus-like exudate that covers a surface produced by some microorganisms.*

Sludge *a general term for soft mud-like deposits found on heat transfer surfaces or other important sections of a cooling system. Also found at the base of calorifiers and cold water storage tanks.*

Stagnation *the condition where water ceases to flow and is therefore liable to microbiological growth.*

Thermal disinfection *heat treatment to disinfect a system*

Thermostatic mixing valve *a mixing valve in which the temperature at the outlet is pre-selected and controlled automatically by the valve.*