

Risk Assessment for Legionella Control

Site Name	Enterprise House
Site Address	Enterprise House, Darlington, DL1 1GY
Site Representative Name	Bruce Whitley
Contact Phone number	07768744856
McAndrew Legionella Services Surveyor	Claire McAndrew
Brief description of use of premises	Offices
Date of Risk Assessment	29 January 2026



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This section details site information, defines the scope of the assessment and includes a schematic diagram of the system and a review of management systems

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This section summarises the findings of the risk assessment.

Section 5 Risk Assessment Survey

This section details the survey information used to complete the risk assessment and includes relevant pictures and schematic diagrams of each system being surveyed.

Section 6 Other Risk Systems

Any system not covered in section 5 is detailed here.

Section 7 Asset Register

A complete list of all assets, their location and source.

Section 8 Summary of Recommendations

A comprehensive list of all actions required, in order of urgency that are needed to ensure compliance with current legislation

Introduction to Legionella and Risk Assessment

Legionella Bacteria

Legionella are bacteria that are common in natural (e.g. lakes and rivers) and artificial water systems (e.g. storage tanks, pipework, taps). We usually associate legionella with larger water systems, e.g. factories, hotels and hospitals; but they can also live in smaller water supply systems such as in homes and other residential accommodation. Legionellosis is the collective name used for infections caused by the legionella bacteria, including the most serious and well-known Legionnaires' disease. Infection with legionella bacteria can be fatal and certain groups of people are known to have a higher susceptibility to the bacteria:

- people over the age of 45
- smokers and heavy drinkers
- people suffering from chronic respiratory or kidney disease
- diabetes, lung and heart disease
- anyone with an impaired immune system. Legionella bacteria can also cause less serious illness which are not fatal but can affect all people.

Any water systems with the right environmental conditions can become sources for legionella bacterial growth.

Legionella and Health and Safety Law

Duty holders have specific obligations under the following legionella legislation:

- Health & Safety at Work etc Act 1974,
- The Control of Substances Hazardous to Health Regulations 2002,
- The Management of Health and Safety at Work Regulations 1999

ACoP L8 advises on how to comply with the above-mentioned legislation. HSG274 Parts 2 and 3 provide practical guidance on how to control the risk from legionella bacteria.

There are several key responsibilities that the duty holder must address:

- There must be a legionella risk assessment that includes all systems where water is stored or used in any premises controlled by the dutyholder (COSHH Regs).
- This risk assessment must be reviewed when required. (See L8 paras 32 & 47.)
- When issuing any invitation to potential service providers to quote/tender for legionella risk assessment services it is extremely important that the scope of the work is clearly defined by the dutyholder or their representative.
- Schematic diagrams and asset registers must be available in order to inform and help the risk assessor. (See L8 paras 38 & 40.)
- The findings of the risk assessment including the required corrective actions and the control measures must be implemented.
- A written control scheme must be produced and maintained.

- Regular reviews of the progress of legionella control activities must be carried out.
- Procedures must be in place to determine if the existing risk assessment remains valid, suitable and sufficient. If it is not, then a risk assessment review is required.

Risk Assessment

Risk assessments are carried out to identify and assess, as far as reasonably practical, the water systems with regards to the risk of exposure to the legionella bacteria. Legionella may be present in very low concentrations in many water systems but by careful control it will be prevented from multiplying.

Risk assessments and recommendations are based on the Health and Safety Commission Approved Code of Practice and Guidance document, also known as L8. In general the guidance is based on "good housekeeping" and recommends that:

- systems are operated safely and correctly and are well maintained
- materials are avoided that can harbour or provide nutrient for micro-organisms
- nutrient is prevented from entering the system where possible
- the build up of sediment, scale and erosion deposits is avoided
- suitable water treatment programmes are used where it is appropriate and safe to do so
- stagnation is avoided
- water is stored below 20° or above 60° C
- water is distributed below 20°C or above 60°C
- all cooling towers, evaporative condensers, water storage tanks and calorifiers are routinely inspected and routinely cleaned to avoid the build up of sediment.

Limitations of assessment

The comments made within this assessment reflect our interpretation of the document L8 and its application and relevance to the plant and services made available for inspection during our time on site.

Whilst every effort has been made to ensure the accuracy of this assessment, it is the responsibility of the Responsible Person to review this assessment and ensure it fully complies with L8 in relation to Legionella Risk Assessment for the site water systems. The Responsible Person must also ensure the risk assessment meets the needs of the site and includes all systems that may present a risk. McAndrew Legionella Services cannot accept responsibility for systems or outlets that were not indicated to the surveyor by the responsible person or representative at the time of the visit.

We are aware of specific limitations that may affect our interpretation and comments:

The time of year may influence results, i.e. temperatures may be significantly increased during the summer months.

Some of the buildings have many concealed services and whilst we have had access to the great majority of plant areas, it has not always been possible, practical or safe to access concealed roof areas and services within the fabric of the buildings. This may limit the accuracy of the risk assessment of certain buildings.

Risk Assessment Review

The assessment of risk is an ongoing process and not merely a paper exercise. Dutyholders should arrange to review the assessment regularly and specifically when there is reason to suspect that it is no longer valid. An indication of when to review the assessment and what to consider should be recorded and this may result from, for example:

- a change to the water system or its use;
- a change to the use of the building where the system is installed;
- new information becoming available about risks or control measures;
- the results of checks indicating that control measures are no longer effective;
- changes to key personnel;
- a case of Legionnaires' disease/legionellosis associated with the system.

Roles and Responsibilities

A dutyholder is the person with overall legal responsibility to ensure health and safety is managed effectively. A responsible person is the individual appointed by the dutyholder who has sufficient authority, competence and knowledge of the installation to ensure that all operational procedures are carried out in a timely and effective manner. The responsible person must have a clear understanding of their duties and be properly trained as they have the day to day responsibility for controlling any identified risk from legionella bacteria. The responsible person may also appoint a deputy who will manage the control of legionella in the responsible persons absence.

Dutyholder	Johan Vickers
Telephone	
Email	

Responsible Person	Johan Vickers
Telephone	
Email	

Responsible Person Deputy	TBD
Telephone	
Email	

Risk Assessor Qualifications

Name	Claire McAndrew
Training	8 years' experience in the water industry
	City & Guilds - Legionella Risk Assessments
Quality checked by:	
Name	John McAndrew
Training	Over 20 years' experience in the water industry
	WREG - Water Supply Regulations (1999) BPEC Certification
	LRADWS - Legionella Risk Assessments & Water System Disinfection for Mechanical Services
	City & Guilds Plumbing Craft & Advanced Craft
	Gas Safe Certified
	Associate Member of The Water Management Society
	Chartered Institute of Plumbing and Heating Engineers Member

Site Information & Scope of Assessment

Scope of the Assessment

As agreed in the quotation, McAndrew Legionella Services will provide:

- A legionella risk assessment to the; cold water mains supply and one hot water cylinder.
- Systems excluded from this assessment are closed systems – the central heating system, this is because users do not come into contact with the water in this system therefore causing minimal/no risk.
- A review of the written scheme and management procedures
- Recommendations for remedial corrective actions to eliminate or reduce the risk
- Recommendations for a legionella management plan
- Matters of evident concern beyond the scope of the assessment are to be communicated to Paul Monkhouse via email/telephone as soon as possible after the assessment.

Site use and description

The site is a complex of office units, each individual unit has its own mains cold water supply and its own hot water supply. Water is supplied by Northumbrian Water. The susceptibility to legionella is considered to be average due to the various usages of each unit.

Description of the system

Mains Supply

The mains supplied cold water to the hot water heater and to all outlets in each unit.

Cold Water Services

There are no cold-water tanks on site.

Hot Water Services

Each unit has either a low volume water heater or an instant hand wash heater.

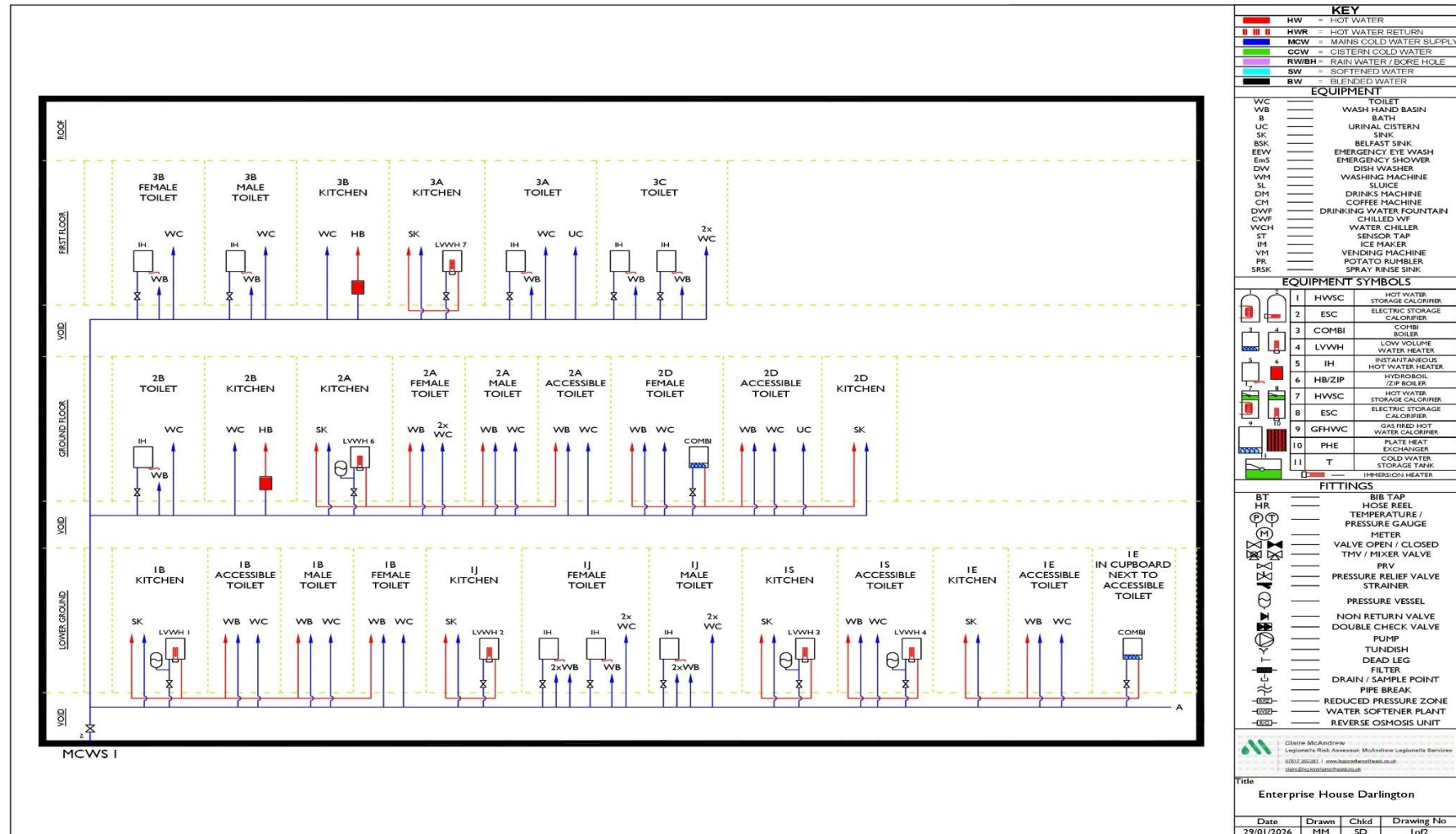
Correct and Safe use of the water system

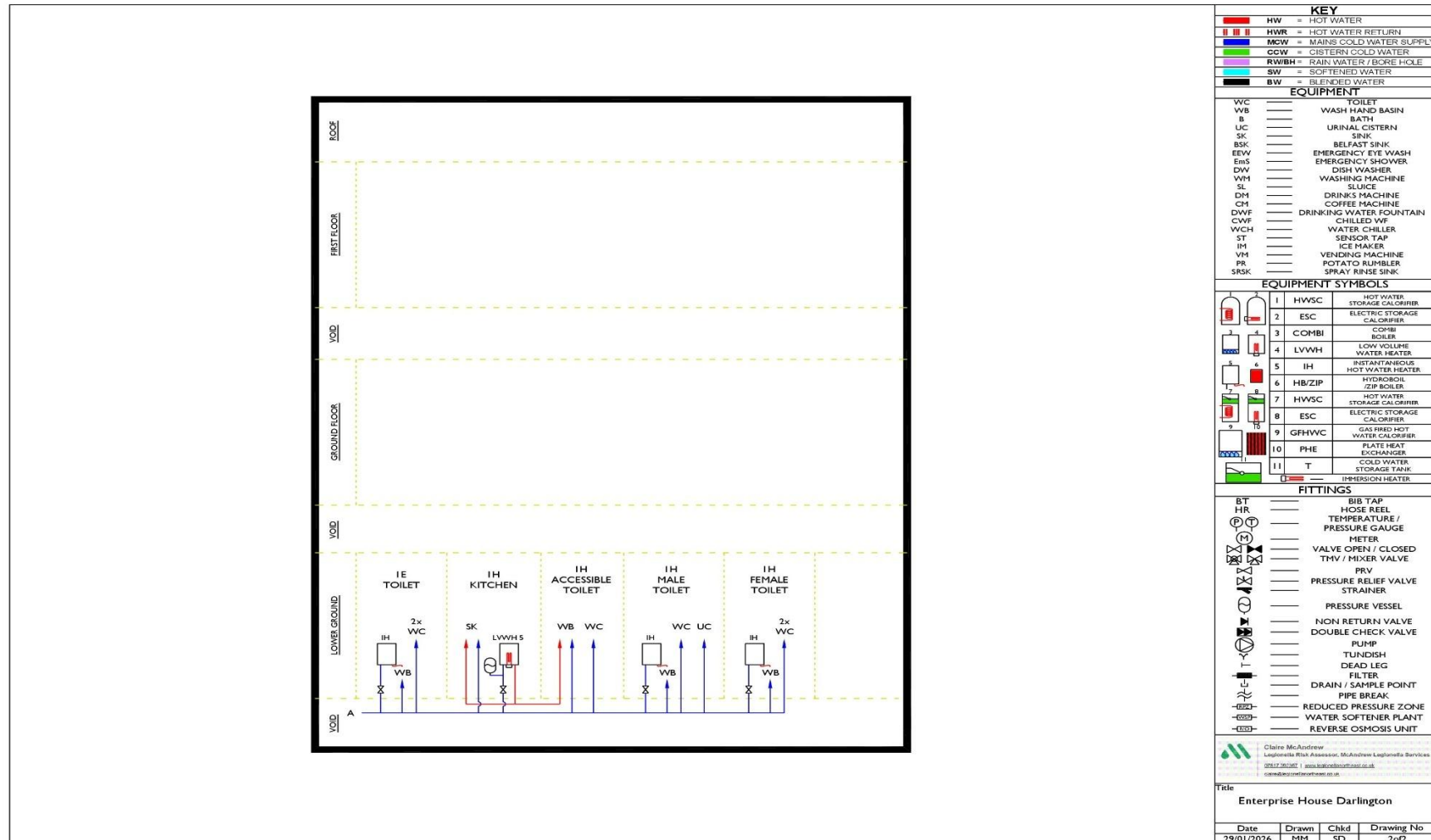
Cold water mains temperature should be below 20°C and all outlets should achieve below 20°C after 2 minutes of flushing

Hot water outlets should reach a temperature of at least 50°C within 1 minute of flushing.

Schematic Diagram

The schematic diagrams throughout this survey are not technical drawings nor are they to scale. These provide a simple illustration of the layout of the water system. It allows any person who is not familiar with the system to understand quickly and easily the layout of the system without any specialised training or knowledge.





Review of Management Procedures

Management Procedures	
Is there a written scheme of control?	No
Is there a legionella monitoring plan in place?	No
Has the previous RA been made available?	No previous risk assessment
Is there a procedure in place to determine if the RA is still valid?	No
Are the Duty Holder, the Responsible Person and any Deputies clearly defined in the written scheme of control?	n/a – no written scheme of control
Are the above roles clearly defined?	n/a
Is there a clear chain of command?	n/a
Is the responsibility for tasks to be undertaken by each individual or party outlined clearly with the necessary frequency of tasks	n/a
Training	
Is the responsible person adequately trained?	No training carried out
Specify training carried out, date of training and topics covered	n/a
Is the responsible person deputy adequately trained?	No training carried out
Specify training carried out, date of training and topics covered	n/a
Are there any other personnel with an involvement in the written scheme of control, e.g. persons who undertake the monitoring, flushing, cleaning and disinfection of shower heads and taps, etc.	None
Are training records available? Are these relevant and valid?	n/a
Do all key personnel have the competence to control the risk from legionella?	The site is low risk and following this assessment a plan will be put into place
Risk Assessment Review	
Have all remedial actions been rectified since the last risk assessment?	n/a
Have the recommendations for a monitoring plan been incorporated into the written scheme?	n/a
Review of the Written Scheme	
Is the description of correct operation of the system still valid?	n/a
Are start up and shut down procedures, plant rotation and flushing of little used outlets documented in the written scheme?	n/a
Is there a procedure in place for 3 rd parties bringing onto site any plant or equipment?	n/a

Are method statements correct and up to date?	n/a
Is the equipment calibrated? Date of last calibration	n/a
Is there an on site log book, is it up to date?	n/a
Is the asset register correct and up to date?	n/a
Is the design of the system correct?	n/a
Are calorifier and CWST inspection records up to date?	n/a
Are temperature monitoring records up to date?	n/a
Is there any evidence of the temperatures being out of the parameters?	n/a
Have corrective measures been applied?	n/a
If yes, how effective were the corrective measures? And were they reviewed?	n/a
Is there an escalation procedure in place?	n/a
Are emergency procedures reviewed?	n/a
Is equipment calibrated and are calibrations up to date?	n/a
Are flushing records up to date?	n/a
Are shower clean and disinfection records up to date?	n/a
Are Expansion vessel flush and drain records up to date?	n/a
Are TMV service records up to date?	n/a
Is there a legionella sampling regime in place?	n/a
Has there been any legionella positive results?	n/a
Have corrective measures taken place to address these?	n/a
Are all roles clearly defined and are contact details available?	n/a
Are lines of communication clearly stated?	n/a
Is there an incident plan in place which covers the procedures to follow if there is an outbreak of legionellosis at the site?	n/a
Are there procedures in place to review the maintenance history of the water system?	n/a
How effective is the written scheme?	n/a

There is no written scheme of control.

This is the first risk assessment to be carried out and following on from this assessment, written procedures and monitoring plans will be produced and implemented.

The site requires management procedures to be produced with clear lines of communication, clearly defined roles and suitable awareness training.

A Written Scheme of control should be produced detailing:

- Correct and safe use of the system
- Control mechanisms and parameters
- Staff Responsibilities
- Lines of Communication
- Training Requirements
- Procedures to determine if the risk assessment is still valid
- Procedures for record keeping
- Emergency management procedures

Executive Summary

The inherent risk of exposure to legionella at this site is **LOW** - this is due to the low potential for aerosol formation and the minimal stored water, however the site would benefit from introducing documented management procedures.

The residual risk is **LOW** – once controls are implemented the residual risk is low, this is due to the procedures in place to control the proliferation and dissemination of legionella bacteria.

The ALARP risk is achieved, this is due to stored water being required for the size of the site.

Once adequate management controls and remedial actions have been implemented, this site risk is **LOW**.

This risk rating has been derived through taking account of:

- The potential for aerosol formation
- The water system, including water storage and temperature
- The susceptibility of those using the building
- Measures already in place

In general, the below is used as a guide:

LOW: Proliferation of legionella is extremely unlikely, no spray outlets, no stored water, high usage of water, low risk users of the water system, temperatures are consistently within the required range, legionella is fully controlled and monitored.

MEDIUM: Proliferation of legionella is possible, spray outlets are present, water is stored, temperatures are mostly within range, legionella is controlled and monitored although further measures could be implemented.

HIGH: Proliferation of legionella is highly possible, spray outlets are present, water is stored, temperatures are not within range, low usage areas, high risk users, there is no legionella control in place.

Summary of remedial actions required:

High risk areas identified:

Little Used Outlets

Areas where there is little movement of water within the system can lead to stagnation which can promote microbial growth, these outlets should be flushed at least once per week to ensure good movement of water throughout the system. The units which are not in use should be flushed weekly and records kept.

Dead Legs

Dead legs allow water to stagnate and promote microbial growth. In some units there are instant hand wash heaters providing hot water, these can lead to the cold tap not being used and creating a dead leg. Either remove the cold tap or introduce a flushing regime for the cold outlets.

Temperature

There is reasonably foreseeable risk for legionella bacteria growth if temperatures in all or some part of the system may be between 20°C and 45°C. In low volume point of use water heaters the water should be stored at a minimum of 50°C with a high turnover of water. Some of the point of use water heaters were operating lower than 50°C and should be adjusted and checked to ensure these are operating at the correct temperature.

Medium risk areas identified:

Expansion Vessels

Expansion vessels in systems operating at steady temperature and pressure may have long periods without exchanging any significant amount of water and therefore can be at risk of aiding microbial growth. These should be flushed and drained every 6 months. Some of the low volume water heaters have an expansion vessel fitted with with no drain off valve so it cannot be flushed, recommend installing a drain off valve.

Low risk areas identified:

Scale – Scale build up can promote bacterial growth, taps should be kept free from scale by cleaning on a regular basis.

Water Regulations

Whilst conducting a Legionella risk assessment on the systems surveyed, we have also identified any Water Regulation risks associated with the operation of the systems.

Most of these systems require a supply of mains water and will therefore be subject to the regulatory applications of the Water Supply (Water Fitting) Regulations 1999, The Water Supply (Water Quality) Regulations 2010, The Water Supply (Water Fittings) (Scotland) Byelaw 2014 and The Private Water Supplies Regulations 2009.

We have particularly looked to identify risks such as inadequate backflow prevention and available pipework not being coded in line with the requirements of L8 & HSG274.

No area identified.

Please see Section 8 for a full list of recommendations.

There are no matters of evident concern outside of the scope of this assessment.

Risk Assessment Methodology

The method of risk assessment considers the principle parameters which govern the risk associated with each water system; they are:

- Aerosol
- Temperature
- Stagnation
- Bacteria
- Nutrients
- Vulnerable population.

The following risk rating has been used to derive a numerical risk rating:

Risk Parameter	Risk Rating	Risk Value
Formation of Droplets		
Still water	Low	10
Droplets	Medium	20
Aerosol	High	30
Water Condition		
Clean	Low	10
Contaminated	Medium	20
Heavily contaminated	High	30
Water Temperature		
Below 20°C	Low	10
21°C - 25°C	Medium	20
26°C - 45°C	High	30
46°C - 59°C	Medium	20
Above 60°C	Low	10
Water Turnover		
High Turnover	Low	10
Moderate Turnover	Medium	20
Low Turnover	High	30
Susceptibility of Exposed Persons		
Average Population	Average	20
High Population	High	30
Population Density of Exposed Persons		
Low Density	Low	10
Medium Density	Medium	20
High Density	High	30

Total Numerical Value	Overall Risk Rating
60-100	Low
101-140	Medium
140 +	High

This numerical risk rating is used in conjunction with other observations during the survey to determine the overall risk rating.

The other observations and remedial actions are given a priority rating:

High		To be completed within one month
Medium		To be completed within 3 months
Low		To be completed within 6 months

If a legionella positive sample has been detected, the overall rating is automatically elevated to HIGH until further legionella samples have been taken and the system is shown to be operating within the required parameters.

Water System Survey

Cold Water System – Mains Supply					
Stop cock location			Each unit has its own stop cock usually in the kitchen area		
What is the temperature at the nearest mains fed tap?			8°C		
What is the temperature at the furthest mains fed tap?			8°C		
Are the cold water pipes insulated?			Not all are insulated		
Risk Assessment					
Parameters	Risks				
	LOW 10		MEDIUM 20		HIGH 30
Formation of droplets	Still Water		Droplets	X	Aerosol
Water condition	Clean	X	Contaminated		Heavily contaminated
Water Temperature	Below 20°C	X	21°C - 25°C		26°C - 45°C
Water Turnover	High		Moderate	X	Low
Susceptibility of Exposed Persons			Average	X	High
Population Density of Exposed Persons	Low		Medium	X	High
60-100 = LOW 101-140 = MEDIUM 140+ = High					Score = 100 LOW Risk
Other Risk Areas					
Is there any redundant pipework/dead legs?			No		
Are there any infrequently used outlets? Including external taps			Yes		
If yes to above are they flushed through on a weekly basis and records available?			Not flushed		
Is there presence of any other outlets creating considerable aerosols and are they disinfected every 3 months?			No aerosols		
Are there any flexi hoses present? Are they WRAS approved?			Yes – all WRAS approved		
Remedial Actions					
Action					Priority
Flushing regime to be implemented for all vacant units.					

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters


Location	Unit 1B - kitchen
Supplies	All hot outlets
Make/model of equipment	Ariston
Capacity	15L
Heat Source	Electric
Is the supply from mains/cistern?	Mains
Flow temperature	51.2°C
Which safety device prevents over pressure?	Expansion Vessel
Is the expansion vessel fitted with a drain valve?	No
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	None
Remedial Actions	
Action	Priority
None required	

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters



Location	Unit 1J - kitchen
Supplies	Kitchen sink
Make/model of equipment	Hyco
Capacity	10L
Heat Source	Electric
Is the supply from mains/cistern?	Mains
Flow temperature	51.2°C
Which safety device prevents over pressure?	-
Is the expansion vessel fitted with a drain valve?	n/a
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	None
Remedial Actions	
Action	Priority
None required	

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters


Location	Unit 1J – Ladies WC
Supplies	Washbasins
Make/model of equipment	Hyco & Redring
Capacity	Instant
Heat Source	Electric
Is the supply from mains/cistern?	Mains
Flow temperature	18.7°C & 21.1°C
Which safety device prevents over pressure?	-
Is the expansion vessel fitted with a drain valve?	n/a
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	The cold tap may become a dead leg
Remedial Actions	
Action	Priority
Either remove cold tap or put on flushing regime so that cold outlets do not become dead legss	

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters	
Location	Unit 1J – Male WC
Supplies	Washbasins x 2
Make/model of equipment	Hyco
Capacity	Instant
Heat Source	Electric
Is the supply from mains/cistern?	Mains
Flow temperature	32°C
Which safety device prevents over pressure?	-
Is the expansion vessel fitted with a drain valve?	n/a
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	The cold tap may become a dead leg
Remedial Actions	
Action	Priority
Either remove cold tap or put on flushing regime so that cold outlets do not become dead legs	

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters



Location	Unit 1S – Kitchen
Supplies	Kitchen sink
Make/model of equipment	Hyco
Capacity	10L
Heat Source	Electric
Is the supply from mains/cistern?	Mains
Flow temperature	32.4°C
Which safety device prevents over pressure?	Expansion vessel
Is the expansion vessel fitted with a drain valve?	No
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	No
Remedial Actions	
Action	Priority
Fit drain valve to expansion vessel to allow flush and drain, where possible	

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters


Location	Unit 1S – Accessible WC
Supplies	Accessible WC washbasin
Make/model of equipment	Hyco
Capacity	10L
Heat Source	Electric
Is the supply from mains/cistern?	Mains
Flow temperature	32.4°C
Which safety device prevents over pressure?	-
Is the expansion vessel fitted with a drain valve?	N/a
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	No
Remedial Actions	
Action	Priority
None required	

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters



Location	Unit 2B – WC
Supplies	WC washbasin
Make/model of equipment	Triton
Capacity	Instant
Heat Source	Electric
Is the supply from mains/cistern?	Mains
Flow temperature	-°C (not switched on)
Which safety device prevents over pressure?	-
Is the expansion vessel fitted with a drain valve?	N/a
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	No – however cold tap may become a dead leg, either remove or put on flushing regime
Remedial Actions	
Action	Priority
Either remove cold tap or put on flushing regime so that cold outlets do not become dead legs	

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters


Location	Unit 2B – Kitchen
Supplies	Kitchen sink
Make/model of equipment	Redring Hydroboil
Capacity	Instant
Heat Source	Electric
Is the supply from mains/cistern?	Mains
Flow temperature	-°C (not switched on)
Which safety device prevents over pressure?	-
Is the expansion vessel fitted with a drain valve?	N/a
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	No
Remedial Actions	
Action	Priority
None required	

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters


Location	Unit 2A – Kitchen
Supplies	Kitchen, Male, Female & Accessible WC
Make/model of equipment	Zip
Capacity	10L
Heat Source	Electric
Is the supply from mains/cistern?	Mains
Flow temperature	-°C (not switched on)
Which safety device prevents over pressure?	-
Is the expansion vessel fitted with a drain valve?	N/a
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	No
Remedial Actions	
Action	Priority
None required	

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters	
	
Location	Unit 3B – Female WC
Supplies	Female WC washbasin
Make/model of equipment	Dimplex 3
Capacity	Instant
Heat Source	Electric
Is the supply from mains/cistern?	Mains
Flow temperature	-°C (not switched on)
Which safety device prevents over pressure?	-
Is the expansion vessel fitted with a drain valve?	N/a
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	No – however cold may become a dead leg
Remedial Actions	
Action	Priority
Either remove cold tap or put on flushing regime so that cold outlets do not become dead legs	

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters


Location	Unit 3B – Male WC
Supplies	Male WC washbasin
Make/model of equipment	Redring 3
Capacity	Instant
Heat Source	Electric
Is the supply from mains/cistern?	Mains
Flow temperature	36.8°C
Which safety device prevents over pressure?	-
Is the expansion vessel fitted with a drain valve?	N/a
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	No – however cold may become a dead leg
Remedial Actions	
Action	Priority
Either remove cold tap or put on flushing regime so that cold outlets do not become dead legs	

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters	
	
Location	Unit 3B – Kitchen
Supplies	Sink – Hydroboil
Make/model of equipment	Redring
Capacity	7L
Heat Source	Electric
Is the supply from mains/cistern?	Mains
Flow temperature	-°C (switched off)
Which safety device prevents over pressure?	-
Is the expansion vessel fitted with a drain valve?	N/a
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	Yes under sink
Remedial Actions	
Action	Priority
Remove dead leg if not being used for washing machine/dishwasher purposes	

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters



Location	Unit 3A – Kitchen
Supplies	Kitchen sink
Make/model of equipment	Zip varipoint
Capacity	10L
Heat Source	Electric
Is the supply from mains/cistern?	Mains
Flow temperature	-°C (switched off)
Which safety device prevents over pressure?	-
Is the expansion vessel fitted with a drain valve?	N/a
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	No
Remedial Actions	
Action	Priority
None required	

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters


Location	Unit 3A – WC
Supplies	WC washbasin
Make/model of equipment	Triton
Capacity	Instant
Heat Source	Electric
Is the supply from mains/cistern?	Mains
Flow temperature	-°C (switched off)
Which safety device prevents over pressure?	-
Is the expansion vessel fitted with a drain valve?	N/a
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	No – however cold may become a dead leg
Remedial Actions	
Action	Priority
Either remove cold tap or put on flushing regime so that cold outlets do not become dead legs	

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters



Location	Unit 2D – Female WC
Supplies	Female WC, Accessible WC and kitchen
Make/model of equipment	Ideal
Capacity	Instant
Heat Source	Gas
Is the supply from mains/cistern?	Mains
Flow temperature	-°C (switched off)
Which safety device prevents over pressure?	-
Is the expansion vessel fitted with a drain valve?	N/a
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	No
Remedial Actions	
Action	Priority
None required	

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters


Location	Unit 3C
Supplies	Washbasins
Make/model of equipment	Triton
Capacity	Instant
Heat Source	Electric
Is the supply from mains/cistern?	Mains
Flow temperature	-°C (switched off – mid refurb)
Which safety device prevents over pressure?	-
Is the expansion vessel fitted with a drain valve?	N/a
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	No
Remedial Actions	
Action	Priority
None required – mid refurb	

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters


Location	Unit 1E – cupboard
Supplies	Kitchen & Accessible WC
Make/model of equipment	Ideal
Capacity	Instant
Heat Source	Gas
Is the supply from mains/cistern?	Mains
Flow temperature	-°C (switched off – mid refurb)
Which safety device prevents over pressure?	-
Is the expansion vessel fitted with a drain valve?	N/a
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	No
Remedial Actions	
Action	Priority
None required – mid refurb	

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters



Location	Unit 1E – WC
Supplies	WC washbasin
Make/model of equipment	Acel
Capacity	Instant
Heat Source	Electric
Is the supply from mains/cistern?	Mains
Flow temperature	-°C (switched off – mid refurb)
Which safety device prevents over pressure?	-
Is the expansion vessel fitted with a drain valve?	N/a
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	No
Remedial Actions	
Action	Priority
None required – mid refurb	

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters


Location	Unit 1H – Kitchen
Supplies	Kitchen & Accessible WC
Make/model of equipment	Ariston
Capacity	10L
Heat Source	Electric
Is the supply from mains/cistern?	Mains
Flow temperature	41.1°C
Which safety device prevents over pressure?	Expansion Vessel
Is the expansion vessel fitted with a drain valve?	No
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	No
Remedial Actions	
Action	Priority
None required – mid refurb	

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters


Location	Unit 1H – male WC
Supplies	WC washbasin
Make/model of equipment	Redring
Capacity	Instant
Heat Source	Electric
Is the supply from mains/cistern?	Mains
Flow temperature	-°C (switched off – mid refurb)
Which safety device prevents over pressure?	-
Is the expansion vessel fitted with a drain valve?	N/a
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	No - however cold tap may become a dead leg
Remedial Actions	
Action	Priority
Either remove cold tap or put on flushing regime so that cold outlets do not become dead legs	

Hot Water System – Low Volume Water Heaters/Combi/Instant Water Heaters


Location	Unit 1H – Female WC
Supplies	WC washbasin
Make/model of equipment	Redring
Capacity	Instant
Heat Source	Electric
Is the supply from mains/cistern?	Mains
Flow temperature	-°C (switched off – mid refurb)
Which safety device prevents over pressure?	-
Is the expansion vessel fitted with a drain valve?	N/a
Does the heater have a high turnover of water?	Yes
Are there any thermostatic mixing valves?	No
If yes to above are they as close as possible to the point of use?	n/a
Is there any presence of other outlets creating considerable aerosols? i.e. showers/spray taps, if so are they disinfected every 3 months?	None
Are there any flexi hoses present? Are they WRAS approved?	Yes all WRAS approved
Is there any dead leg pipework?	No - however cold tap may become a dead leg
Remedial Actions	
Action	Priority
Either remove cold tap or put on flushing regime so that cold outlets do not become dead legs	

Other Risk Systems

There are no other risk systems present at this site.

Asset Register

WATER SOURCE	OUTLET	LOCATION	SENTINAL	HOT °C	Cold °C	Mixed °C	TMV	TMV ISOLATION	TMV ACCESSIBLE	FLEXI HOSE?	WRAS APPROVED	SCALE/DEBRIS
1B												
LVWH & CWM	Sink	Kitchen		55.2	9.6					Y	Y	
	WC	Accessible WC										
	Washbasin			44	9.6							
	WC	Male WC										
	Washbasin			46.7	9.6					Y	Y	
	WC x 2	Female WC										
	Washbasin			46	9.6					Y	Y	
1J												
LVWH & CWM	Sink	Kitchen		65.5	8.2							
CWM	WC x 3	Female WC										
IWH & CWM	Washbasin			18.7	8.7							
IWH & CWM	Washbasin				8.7							
CWM	UC	Male WC										
CWM	WC x 2											
IWH & CWM	Washbasin x 2			32	7							
1S												
LVWH & CWM	Sink	Kitchen		32.4	8.4							
LVWH & CWM	Washbasin	Accessible WC		46.2	8.1							
CWMA	WC											
2B												
CWM	WC x 2	WC										
IWH & CWM	Washbasin											
HB & CWM	Sink	Kitchen								Y	Y	

WATER SOURCE	OUTLET	LOCATION	SENTINAL	HOT °C	Cold °C	Mixed °C	TMV	TMV ISOLATION	TMV ACCESSIBLE	FLEXI HOSE?	WRAS APPROVED	SCALE/DEBRIS
2A												
LVWH & CWM	Sink	Kitchen			10.8					Y	Y	
	WC x 2	Female WC			8							
	Washbasin								Y	Y		
	WC	Male WC										
	Washbasin								Y	Y		
	WC	Accessible WC										
	Washbasin								Y	Y		
3B												
CWM	WC	Female WC										
IWH & CWM	Washbasin				8.1							
CWM	WC	Male WC										
IWH & CWM	Washbasin											
CWM & HB	Sink	Kitchen										
3A												
LVWH & CWM	Sink	Kitchen										
CWM	WC	WC										
CWM	UC											
IWH & CWM	Washbasin									Y	Y	
2D												
Combi & CWM	WC x 2	Female WC			7.9							
	Washbasin	Accessible WC			7.9							
	WC											
	UC											
	Washbasin											
	Sink											
	Sink	Kitchen			7.9							

WATER SOURCE	OUTLET	LOCATION	SENTINAL	HOT °C	Cold °C	Mixed °C	TMV	TMV ISOLATION	TMV ACCESSIBLE	FLEXI HOSE?	WRAS APPROVED	SCALE/DEBR IS
3C												
CWM	WC x 2	3C				3C						
IWH & CWM	Washbasin											
IWH & CWM	Washbasin											
1E												
Combi & CWM	Sink	Kitchen										
	WC	Accessible WC										
	Washbasin								Y	Y		
CWM	WC x 2	WC										
IWH & CWM	Washbasin											
1H												
LVWH & CWM	Sink	Kitchen		41.1	8.2							
	WC	Accessible WC										
	Washbasin			8.2								
CWM	WC	Male WC										
CWM	UC											
IWH & CWM	Washbasin			8.2								
CWM	WC x 2	Female WC										
IWH & CWM	Washbasin			8.2								

Risk Assessment Summary of Recommendations

Key

High risk
needs to be
addressed within
1 month

Medium risk
needs to be
addressed within
3 months

Low or no risk
Needs to be
addressed
within 6 months

RECOMMENDATIONS	PRIORITY	DATE COMPLETED	PERSON COMPLETED BY
Implement a written scheme of control with clearly defined responsibility and frequency of tasks as defined in ACoP L8 and HSEs HSG 274 part 2 section, using table 1 below as a guide.	High risk		
Implement a legionella control plan using table 2 below as a guide.	High risk		
Undertake suitable training for all personnel involved in the control of legionella for the site.	High risk		
All vacant units should implement a flushing regime to prevent water stagnation.	High risk		
Dead legs/little used outlets - In some units there are instant hand wash heaters providing hot water, these can lead to the cold tap not being used and creating a dead leg. Either remove the cold tap or introduce a flushing regime for the cold outlets.	High risk		
Temperature – some of the low volume water heaters are not storing at 50°C, adjust thermostats and check operating correctly.	High risk		
Unit 1H Accessible WC washbasin tap, no hot coming out, hot water in pipework, new tap required.	High risk		
Unit 3B kitchen, dead leg under kitchen sink, if no dishwasher or washing machine is installed then remove dead leg.	High risk		
Some of the low volume water heaters have an expansion vessel fitted with no drain off valve so it cannot be flushed, recommend installing a drain off valve where practical.	Medium risk		

Table 1 - Recommendations to include in written procedures

Recommendations	RESPONSIBILITY
Devise a written scheme of control for controlling the risk from exposure to legionella bacteria. The written scheme should specify measures to take to ensure it remains effective.	Dutyholder
Description of the correct and safe operation of the system	Dutyholder
Staff Responsibilities	Dutyholder
Lines of communications	Dutyholder
Training requirements	Dutyholder
Procedures to determine if the risk assessment is still valid	Dutyholder
Procedures for record keeping and retrieval	Dutyholder
Remedial actions to be taken in the event the scheme is shown not to be effective	Dutyholder
Incident plan in the event of an outbreak	Dutyholder

Table 2 - Recommendations for activities to be included in the management plan

SERVICE	ACTION TO TAKE	FREQUENCY
Hot Water Services	Check flow temperatures (temperatures should not be below 50°C and should have high turnover of water)	6 Monthly
	Take temperatures at a representative selection of other points 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	6 Monthly
Cold Water Services	Check temperatures at sentinel taps. These outlets should be below 20 °C within two minutes of running the cold tap	6 Monthly
	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.	6 Monthly
Infrequently used outlets	Infrequently used equipment within a water system (ie 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	Weekly
Expansion vessels	Flush through and purge to drain	6 monthly

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