

# Legionella Risk Assessment



## ACoP L8 the control of Legionella bacteria in water systems



### Lodge Park Sports Centre



This assessment satisfies the requirements of the **HSE Approved Code of Practice for “the control of Legionella bacteria in water systems (ACoP L8)** and produced with reference to the new **British Standard BS8580-1:2019 Risk Assessments for Legionella Control**, the **Water Management Society Guide to Legionella Risk Assessment for Water Services**, the **BSRIA Guide, Legionnaire’s Disease – Risk Assessment** and **CIBSE TM13 Minimising the risk of legionnaire’s disease**.

Other Regulations and Technical Guidance are considered in the preparation of the assessment including the **Water Supply (Water Fittings) Regulations**, the **Department of Health Technical Memoranda HTM 04-01 (Healthcare Premises)** and **HTM 01-05 (Dentistry)**.

Where these apply, reference to them is shown in the coloured typeface indicated.

The risk assessment and any accompanying documents are supplied in electronic PDF format unless bound hard copy is specifically requested.

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## Control Scheme (Logbook)

An electronic monitoring record scheme is in use

## About Us

Watertec Compliance Solutions is a Midlands based specialist Legionella control company supplying risk assessment, monitoring, analytical, training, disinfection and remedial services throughout the UK and Ireland.

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## How we categorise risk

### 1 System Type

Domestic water systems are categorised 1-6 with 1-3 indicating simple mains fed domestic systems and 4-6 indicating larger mains or tank fed hot and/or cold-water services which may incorporate pumped and/or boosted systems.

System categorisation does not relate to Legionella proliferation or exposure risk. These issues are considered separately in the assessment.

### 2. System Compliance

Temperature is the primary control measure for successful Legionella control. The system compliance category rates the installed hot and cold-water services as compliant, non-compliant or faulted as described in the following table:

<b>C</b>	Compliant hot & cold-water services: <ul style="list-style-type: none"><li>Hot water stored at 60 (+/-3) °C</li><li>hot water supplied to outlets at 50-60°C (no temperature requirement for instant handwash installations) within 1 minute</li><li>cold water supplied to outlets at less than 20°C within 2 minutes of opening the outlet</li><li>Compliant cold-water storage tank installation (where fitted) storing at less than 20°C and supplying cold water to outlets (other than WC flushes supplied by rainwater recovery or greywater systems) of a similar quality to the mains supply</li></ul>
<b>NCT</b>	Non-compliant hot or cold-water storage temperatures or not achieving compliant temperatures at all outlets within the specified time (hot water within one-minute, cold water within two minutes)
<b>NCF</b>	Faulted hot and/or cold-water supply

### 3. Proliferation Risk

The assessment is set out in numerous sections which detail the various component parts of the domestic and other water systems where these are installed. A proliferation risk score is applied to each section as detailed in the following table:

<b>L-</b>	Very low
<b>L</b>	Low
<b>L+</b>	Slight
<b>M</b>	Moderate
<b>M+</b>	Increased
<b>H</b>	High

### 4. Aerosol Exposure

This risk category considers aerosol exposure to building users and categorised low, moderate or high as detailed in the following table:

Aerosol Exposure	Cause
<b>Low exposure risk</b>	No showers or other aerosol generator in use
<b>Moderate exposure risk</b>	Low to moderate use of showers or another aerosol generator
<b>High exposure risk</b>	Moderate to high use of showers or another aerosol generator

### 5. Population Risk

An assessment of the building population's susceptibility to Legionella infection is included in the Overview Section of the assessment.

<b>Client</b>	Corby Borough Council
<b>Property address</b>	Shetland Way, Corby, NN17 2SG
<b>Population</b>	>10 staff member & ad-hoc visitors 7 days per week
<b>Seasonal Use</b>	Year-round use but typically, increased footfall during the summer.
<b>Public access</b>	Yes
<b>Assessment date</b>	10/05/2019
<b>Risk assessor</b>	David Lynch
<b>Property description</b>	The site is a two storey purpose built structure housing a bar, washrooms & 2 changing rooms.
<b>Property use</b>	Sports & fitness centre



<b>Population risk</b>	V low	Low	Slight	<b>Moderate</b>	Increased	High
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<b>Water supplier</b>	Anglian Water – Water hardness is hard in this area
<b>Domestic systems</b>	<b>Cold Water:</b> Limited direct mains with the majority of outlets tank fed. <b>Hot Water:</b> Supplied by two parallel linked vented gas fired water heaters
<b>Other risk systems</b>	Not applicable

<b>Regulation, Codes of Practice &amp; Technical guidance</b>	<p><b><u><a href="#">ACoP L8 the control of Legionella bacteria in water systems</a></u></b></p> <p><b><u><a href="#">HSG274 Part 1 The control of Legionella bacteria in evaporative cooling systems</a></u></b></p> <p><b><u><a href="#">HSG274 Part 2 The control of Legionella bacteria in domestic water systems</a></u></b></p> <p><b><u><a href="#">HSG274 Part 3 The control of Legionella bacteria in other risk systems</a></u></b></p> <p><b><u><a href="#">HTM 04-01b Safe Water in Healthcare Premises</a></u></b></p> <p><b><u><a href="#">HTM 01-05 Primary Care Dental Practices</a></u></b></p> <p><b><u><a href="#">The Water Supply (Water Fittings) Regulations 1999</a></u></b></p>
<i>Recommended: (click on the hyperlink to download the referenced document)</i>	
<i>(If shown in a grey typeface the technical guidance does not apply)</i>	

<b>Existing arrangements</b>	Expiring risk assessment. Monthly attendance by a specialist contractor
<b>Duty Holder</b>	Norman Stronach – Chief Executive
<b>Acting Duty Holder</b>	Jonathan Waterworth Head of Property Services
<b>Responsible Person/Deputy Email &amp; Tel No.</b>	TBA
<b>Others</b>	Contractors: Watertec & IWS
<b>Training</b>	Site staff have access to online Legionella awareness training

<b>Domestic system</b>	5	6	5	4	3	2	1
<b>System compliance</b>	NCT	5	4	3	2	1	
<b>Proliferation risk</b>	M	4	3	2	1		
<b>Exposure risk</b>	HE	2	1				
<b>Assessment review</b>	End May 2021	L-	L	L+	M	M+	H

### 3 Executive Summary

<b>Domestic Systems</b>	The mains rises in an unknown location and feeds limited outlets, also provides make-up water to a cold water storage tank (CWST 01), located in the loft tank room. CWST 01 gravity feeds 2 vented gas fired water heaters (GFWH 01-02), and the majority of cold water outlets. GFWH 01-02 are located in the boiler room, fitted with a recirculating system and supply hot water services throughout. There are 15 showers, 5 spray taps and 18 thermostatic mixing valves on-site, to ensure a constant and safe temperature at WC WHB's/showers.
<b>Other Systems</b>	Not installed
<b>Condition</b>	CWST 01 is internally in an unsatisfactory condition of cleanliness (last serviced February 2010 by IWS). The tank installation complies with the Water Supply (Water Fittings Regulations) 1999. All outlets exhibit significant scale accumulation Several areas are used, which could provide conditions suitable for Legionella proliferation. No flushing records seen. 2 dead ends, a WHB with no hot/cold water flow, GFWH 01 isolated pipework, and an LPHW feed & expansion tank (low draw off) are also sources of stagnation. TMV's >2m from served outlets are also favourable to the colonisation of Legionella bacteria.
<b>Temperatures</b>	All hot & all cold outlet water temperatures within time limits. GFWH 02 fails to store at recommended minimum temperature of 60°C GFWH 01 has been offline for some time
<b>Observations</b>	System is well suited to demand providing showers are frequently used.

The assessment identifies there to be an inherent Legionella risk associated with the installed water services at the property. The risk cannot be eliminated but can be reduced, by substitution, carrying out the recommended remedial work and controlled by implementing the recommended inspection, maintenance and monitoring measures.

The assessment and Control Scheme should be considered a 'living document' and reviewed if there is reason to believe that the original assessment may no longer be valid e.g. changes to the water system, Legionella Management and Control procedures a case of Legionnaires disease associated with the system etc.

The recommended procedural and system improvements, inspection, monitoring, sampling and maintenance tasks (Control Scheme) are detailed below and should be carried out within the timescales and at the frequencies described.

<b>Governance</b>	<b>Topic</b>	<b>Action</b>
(topics in bold type are legal obligations)	Introduce a Legionella Policy & Procedures	Recommended
	Identify the Duty Holder	Legal requirement
	<b>Appoint a Responsible Person (in writing)</b>	Legal Requirement
	<b>Introduce and operate the recommended Control Scheme &amp; keep records (for 5 years)</b>	Legal Requirement
	Control Scheme record keeping	Electronic
	Appoint others (if required) to carry out specified recommended monitoring, sampling, inspection & maintenance tasks	None - appointed
	<b>Ensure that all persons involved in operation of the Control Scheme are competent and sufficiently trained for their role</b>	Legal Requirement
	<b>Control Scheme recommended review period</b>	12 months
	<b>Risk Assessment recommended review period</b>	24 months

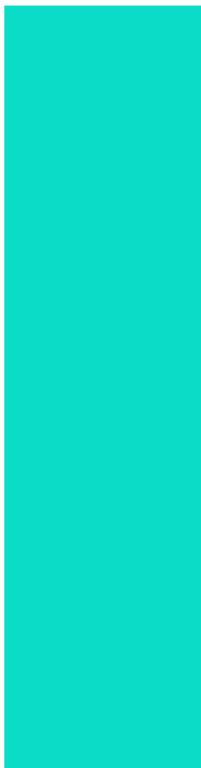
Elimination	Topic		Action
	GFWH 01 - offline	Section 12	Review at or before next assessment
	TMV's: Consider removal of TMV's at outlets were users are not considered to be susceptible to scalding	Section 15	Review at or before next assessment
	Dead legs & dead ends	Section 16	1 month

Substitution/ Replacement	Topic		Action
	Remove the tank system from service and covert the hot water system to a direct mains feed (if practical). This will reduce the overall Legionella risk associated with the installed water services at the property and reduce the level of maintenance and routine inspection required.	Section 11 & 12	Recommended one-off installation

Improvement	Topic		Action
	Flexible hoses	Section 10	Advisory
	Replace common TMV with local TMV's	Section 15	Advisory
	Review and identify low use outlets regularly, flush thoroughly.	Section 17	Weekly Twice weekly (showers)
	No flow from 1 <sup>st</sup> floor male WC child WHB outlets	Section 16	1 month
	LPHW feed & expansion tank (low draw off)	Section 16	1 month
	Improve TMV access in male WC	Section 15	12 months

Disinfection	Topic		Action
	CWST 01	Section 11	1 month

Inspection & Maintenance	The following items require routine inspection & maintenance:		
	Topic		Action
	Insulate exposed long pipework runs	Section 10	Recommended one off fitment
	Water Supply (Water Fittings) Regulations – domestic systems	Section 10	Recommended one off fitment
	Inspect and de-scale outlets regularly	Section 7	Recommended every 3 months
	Showerhead cleaning & disinfection	Section 14	Required every 3 months
	GFWH 02 - inspect & flush as required	Section 12	Annual requirement
	CWST 01 – inspect and carry out identifies remedial work as required	Section 11	Annual requirement
	TMV's (inspect, adjust, clean, repair, remove or replace as required)	Section 15	Annual requirement



<b>Monitoring</b>	Monitoring & maintenance records are a key component of the Control Scheme. Tasks that can be carried out by staff members and those that require the assistance of a specialist should be identified, allocated and implemented		
	<b>Topic</b>		<b>Action</b>
	Recommended inspection, monitoring & maintenance tasks carried out by members of staff	Section 20	TBA
	Recommended inspection, monitoring & maintenance tasks carried out by a specialist	Section 20	IWS
	Responsible Person - recommended Control Scheme record review period	Section 20	Annual

**Sampling** Not required

<b>Labelling</b>	Outlet labelling in areas with public access and in washrooms is considered best practice and can be a reasonable alternative strategy to the fitting of scald protection devices		
	<b>Topic</b>		<b>Action</b>
	Label outlets in high risk areas 'Caution Hot Water', 'Drinking Water' or 'Not Drinking Water'	Section 7	Advisory

#### 4 Assessment Scope

<b>Evaporative Cooling Systems HSG274 P1</b>	Not installed
<b>Domestic Water Systems HSG274 P2</b>	Inspection of all domestic water system components including pipework, valves, strainers, filters, pumps, dosing and softening equipment, hydraulic accumulators, expansion vessels, outlets, appliances and ablutions including (where fitted) detailed inspection of cold-water storage and water heater installations
<b>Other Risk Systems HSG274 P3</b>	Not installed
<b>Excluded systems</b>	LPHW central heating systems, mini-split air conditioning, drainage and sewer discharges are excluded from the risk assessment as these are closed systems and/or do not present a Legionella risk in everyday use. Suitable precautions should be taken however to avoid aerosol generation and inhalation when accessing and maintaining systems with a piped water supply
<b>Governance</b>	Review of current Legionella control arrangements including any previous assessment and the identification of the Duty Holder, Responsible Person(s) and other key staff members. Where available the review includes the inspection of policies, procedures, training records, documentation and monitoring results

#### 5 Existing Arrangements

<b>Legionella Policy</b>	No policy document
<b>Systems &amp; Procedures</b>	No Council written procedures
<b>Duty Holder</b>	Norman Stronach CEO
<b>Acting Duty Holder</b>	Jonathan Waterworth Head of Property Services
<b>Responsible Person</b>	TBA
<b>Contractors</b>	Regular attendance by a specialist contractor
<b>Training</b>	Site staff have access to online Legionella awareness training
<b>Logbook</b>	Electronic (IWS system) and site logbook

#### 6 Water Systems HSG274 P1

<b>Evaporative cooling systems</b>	Not installed
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#### 6 Water Systems HSG274 P2 Domestic

<b>Mains water service (MWS)</b>	Supplied by: Anglian Water
<b>Tank fed cold water service (TCWS)</b>	CWST 01
<b>Hot water service</b>	Primary system: GFWH 01-02

#### 6 Water Systems HSG274 P2 Other

<b>Softened water systems</b>	Not installed
<b>Dosing systems</b>	Not installed

#### 6 Water Systems HSG274 P3

<b>Other systems</b>	Not installed
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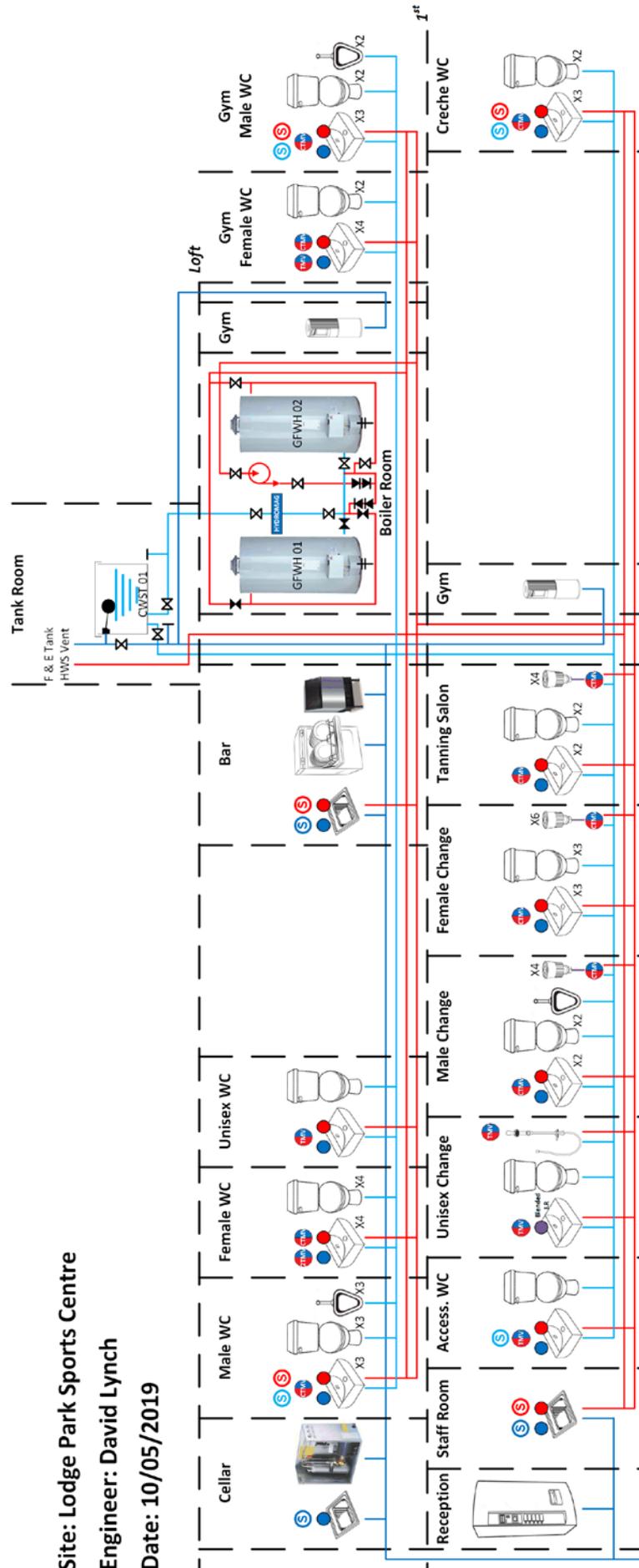
# 7 Asset Register

Floor	Location	Heaters	Tanks	Sinks	Ablutions			Scald Protection			Temperature °C		Sentinel			Appliances				Dental Water Use			Comments	
					WHB's	WC/Urinal	Showers	TMV	TMV Tap	L Throw	Hot	Cold	Hot	Cold	Hot	Cold	Hot	Cold	W Machine	D Washer	Other	Vending machine		DCU
G	Reception			1								55.2	15.7	Y	Y									Outlets fitted with flow straighteners & flexible hoses. Significant outlet scaling present.
G	Staff room																							Outlets fitted with flow straighteners & flexible hoses. Significant outlet scaling present.
G	Accessible WC				1	1 WC	1	1					14.4		Y									Outlet fitted with spray fitting & flexible hoses. Significant outlet scaling present.
G	Unisex WC				1	1 WC	1	2																Outlets fitted with flow straighteners & flexible hoses. Significant outlet scaling present.
G	Male change				2	2 WC 1 UR	4	2 CTMV																Outlets fitted with flow straighteners & flexible hoses. Significant outlet scaling present.
G	Female change				3	3 WC	6	2 CTMV																Outlets fitted with flow straighteners & flexible hoses. Significant outlet scaling present.
G	Tanning salon				2	2 WC	4	2 CTMV																Outlets fitted with flow straighteners & flexible hoses. Significant outlet scaling present. Shower unused
G	Gym																							Outlets fitted with flow straighteners & flexible hoses. Significant outlet scaling present.
G	Creche				3	2 WC		CTMV				51.8	14.6	Y	Y									Outlets fitted with flow straighteners & flexible hoses. Significant outlet scaling present.
					<b>12</b>	<b>11 WC</b> <b>1 UR</b>	<b>15</b>	<b>10</b>																<b>2</b>
					<b>1</b>																			

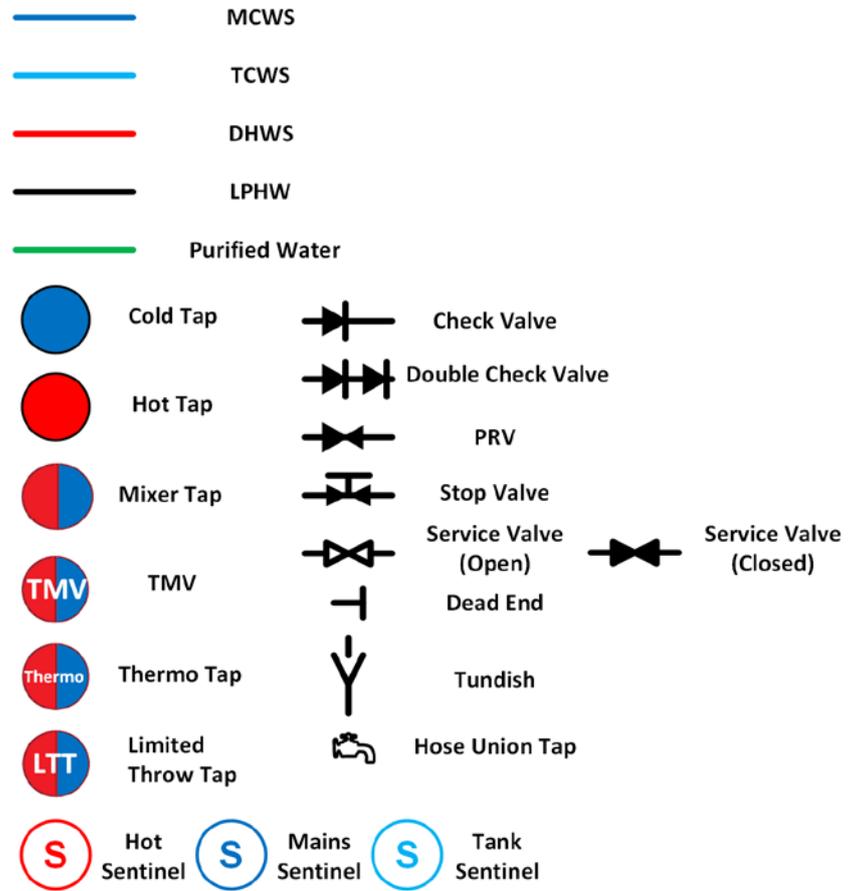
# 7 Asset Register

Floor	Location	Heaters	Tanks	Sinks	Ablutions		Scald Protection			Temperature °C			Sentinel			Appliances				Comments			
					WHB's	WC/Urinal	Shower	TMV	TMV Tap	L Throw	Hot	Cold	Hot	Cold	Hot	Cold	Y	Y	W Machine		D Washer	Other	DCU
1st	Cellar			1								10.4			Y								Significant outlet scaling present. Unused
1st	Male WC				3 WC 3 UR		CTMV				51	16.2	Y	Y									4 outlets fitted with spray fittings, 2 outlet fitted with aerators & all fitted with flexible hoses. Significant outlet scaling present. Infrequent use
1st	Female WC				4 WC		2 TMV CTMV																Outlets fitted with spray fittings & flexible hoses. Significant outlet scaling present. Infrequent use
1st	Unisex WC				1 WC		1																Outlets fitted with flow straighteners & flexible hoses. Significant outlet scaling present. Infrequent use
1st	Bar			1														1					Significant outlet scaling present. Unused
1st	Gym																						Unused
1st	Gym female WC				4 WC		TMV CTMV																Outlets fitted with flow straighteners. Significant outlet scaling present. Unused
1st	Gym male WC				2 WC 2 UR		CTMV				51	13.9	Y	Y									Outlets fitted with flow straighteners. Significant outlet scaling present. Unused
<b>Total:</b>				<b>2</b>	<b>15</b>	<b>14 WC</b> <b>5 UR</b>	<b>8</b>											<b>1</b>					

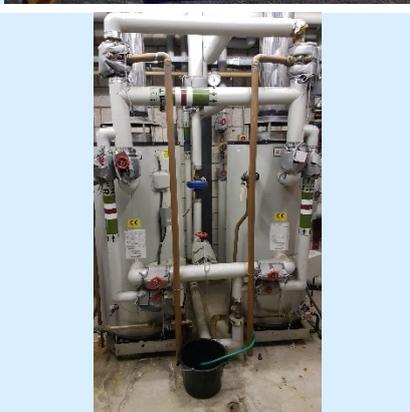
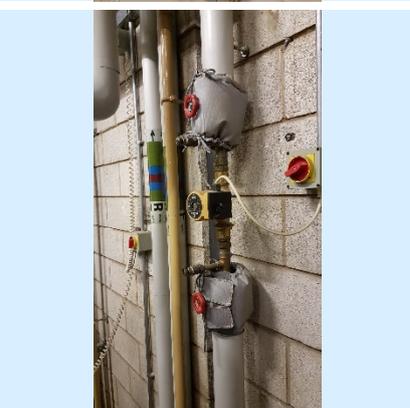
Site: Lodge Park Sports Centre  
 Engineer: David Lynch  
 Date: 10/05/2019

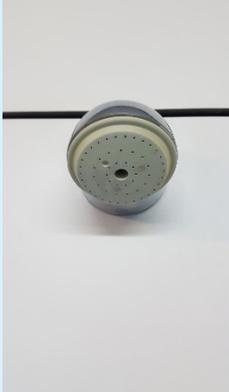


**Schematic Key:**



9 Photo Record

<p>Loft tank room</p>	<p>View of CWST 01 in tank room.</p>	
<p>Loft tank room</p>	<p>Internal view of CWST 01. Note: Light sediment deposits</p>	
<p>Loft tank room</p>	<p>Internal view of CWT 01. Note: Internal surfaces are contaminated with microbial black spots.</p>	
<p>Loft tank room</p>	<p>View of CWST 01 service label.</p>	
<p>Boiler room</p>	<p>View of GFWH 01-02 in boiler room. Note: GFWH 01 is offline &amp; isolated.</p>	
<p>Boiler room</p>	<p>View of GFWH 01-02 return pump.</p>	

<p>Various</p>	<p>Typical example of outlets exhibiting significant scale accumulation.</p>	
<p>Various</p>	<p>Typical example of flexible hoses plumbed to outlets.</p>	
<p>Unisex change</p>	<p>View of mixer shower.</p>	
<p>Unisex change</p>	<p>View of showerhead.  Note: Clean</p>	
<p>Various</p>	<p>Typical example of a fixed showerhead.  Note: Clean</p>	

Various	Typical example of a spray tap.	
Various	Typical example of a TMV installation.	
Tank room	View of dead end identified on mains pipework.	
Tank room	View of dead end identified on CWST 01 outlet pipework.	
Tank room	View of LPHW feed & expansion tank at height in the tank room.  Note: Dead leg due to low draw off.	

10 Pipework, Fittings, Outlets & Appliances

<b>Mains isolation</b>	Not located					
<b>Water systems</b>	Limited mains fed outlets with majority tank fed					
<b>Water pressure</b>	Good					
<b>Water flow</b>	Good (excl. 2 outlets)					
<b>Pipework type</b>	Copper					
<b>Fittings</b>	Copper					
<b>Pumped return</b>	Fitted					
<b>Insulation</b>	Throughout boiler room/CWST 01 associated pipework					
<b>Labelling</b>	Fitted throughout boiler room					
<b>Pumps</b>	Not fitted					
<b>Filters</b>	Not fitted					
<b>Strainers</b>	Not fitted					
<b>Isolation valves</b>	Fitted					
<b>Service valves</b>	Fitted including TMV inlets					
<b>Flexible hoses</b>	Fitted					
<b>Temperature &amp; pressure reducing valves</b>	Not fitted					
<b>Thermostatic mixing valves</b>	18 fitted					Refer to Section 15
<b>Accumulators &amp; expansion vessels</b>	Not fitted					
<b>Mains fill loops</b>	Not fitted					
<b>Dead legs &amp; dead ends</b>	6 identified					Refer to Section 16
<b>Outlet type</b>	1 mixer tap fitted					
<b>Outlet condition</b>	All outlets exhibit significant scale accumulation					
<b>Showers</b>	15 identified in changing rooms					Refer to Section 14
<b>Appliances</b>	6 domestic					
<b>Backflow protection</b>	<i>Not fitted - appliances with a flexible hose connection or sub fluid category 1 backflow risk should have double check valves fitted to the supply</i>					
<b>Advice</b>	Copper pipework (& fittings) should be used in preference to plastic alternatives as it is less prone to the formation of biofilms. The use of plastic pipework can cause electrical earthing issues. Pipework runs should be insulated and labelled to aid identification. Backflow protection devices should be fitted wherever there is a risk of mains backflow contamination by sub fluid category 1 (drinking water) fluids. The use of flexible hoses should be avoided where practicable and if fitted WRAS approved types should be used.					
<b>Maintenance</b>	Filters should be routinely replaced at a frequency advised by the manufacturer. Outlets and strainers should be inspected and cleaned periodically (particularly if strainers are fitted and reduced flow is observed at the outlet). Hydraulic accumulators and expansion vessels should be fitted with correct orientation (vertically up) and flushed periodically where practicable					
<b>Observations</b>	No flow noted at 1 <sup>st</sup> floor male WC child WHB					
<b>Legionella risk</b>	Scaled outlets can provided safe harbour for Legionella bacteria Dead legs/ends encourage stagnation					
<b>Recommendations</b>	Check flexible hoses for WRAS approval markings Open GFWH 01 isolated valves to purge stagnant water Cut back dead ends Fit DCV to LPHW pressurisation unit inlet at point of flow					Advisory Weekly 1 month
<b>Risk Rating</b>	L-	L	L+	M	M+	H

## 11 Water Tanks

	<b>CWST 01</b>
<b>Type</b>	On-piece GRP
<b>Describe</b>	4532li actual capacity
<b>Supply to</b>	Majority of outlets & GFWH 01-02
<b>Location</b>	Loft tank room
<b>Boosted?</b>	No
<b>Hydraulic accumulators</b>	Not applicable
<b>Access</b>	Good
<b>External condition</b>	Good
<b>Internal condition</b>	Light sediment/scale deposits & microbial black spotting.
<b>Inlet temperature °C</b>	11.7
<b>Outlet temperature °C</b>	14.1
<b>Insulation</b>	Pre-insulated
<b>Inlet &amp; valves</b>	Fitted
<b>Float</b>	Ball valve part 1
<b>Outlet(s) &amp; valves</b>	Fitted
<b>Crossflow</b>	Yes
<b>Open vent</b>	No
<b>Screens &amp; vents</b>	Fitted
<b>Samples</b>	Not taken

<b>Advice</b>	<p>Cold water storage tanks supplying domestic water systems should be installed to the standards set by WRAS and sized or adjusted to turnover their capacity at least once in normal daily use.</p> <p>Tanks should be insulated and fitted with a close-fitting lid. The lid should have a screened vent and overflow pipework should have an insect screen. Tanks with a capacity greater than 1000li should have warning and overflow pipework fitted. In larger properties tanks supplying drinking water may be installed and require additional controls .</p> <p>Any tanks supplying 'closed systems' are noted for reference only, but consideration is given to the mains supply pipework and the suitability of the backflow protection devices fitted. It is best practice to fit CVs as close as possible to the nearest point of regular flow to pipework runs supplying boiler feed and expansion and process water supply tanks where low flow conditions are likely.</p>						
<b>Inspection &amp; Maintenance</b>	Inspect cold water storage tanks (at least) annually and note external and internal condition and supply and storage temperature. Tanks should be cleaned & disinfected where significant silting, scaling or biofilm formation is noted.						
<b>Observations</b>	Access is via a retractable ladder						
<b>Legionella risk</b>	Microbial black spots could potentially be Legionella species.						
<b>Recommendations</b>	Clean and disinfect ensuring all microbial black spots are removed. Repaint internal surfaces where finish has become porous.						
<b>Risk Rating</b>	<table border="1"> <tr> <td>L-</td> <td>L</td> <td>L+</td> <td><b>M</b></td> <td>M+</td> <td>H</td> </tr> </table>	L-	L	L+	<b>M</b>	M+	H
L-	L	L+	<b>M</b>	M+	H		

1 month

12 Water Heaters

	GFWH 01	GFWH 02				
Type	Vented direct	Vented direct				
Location	Boiler room	Boiler room				
Supply (mains/tank/hard/soft)	CWST 01	CWST 01				
Calorifier?	No	No				
Circulating?	Yes	Yes				
Describe	Stainless steel 245li Model: Lochinvar CE600	Stainless steel 245li Model: Lochinvar CE600				
Age	Unknown	Unknown				
Accessibility	Good	Good				
Condition	Offline	Good				
Use	Daily	Daily				
Insulation	Pre-insulated	Pre-insulated				
Supply to	HWS throughout	HWS throughout				
Shunt pump	Not fitted	Not fitted				
Supply Temperature °C	Off	56.0				
Return Temperature °C	50.3	50.3				
Primary heat	Gas instantaneous	Gas instantaneous				
Secondary heat	None	None				
Inlet & valves	Fitted	Fitted				
Outlet(s) & valves	Fitted	Fitted				
Drain valve (location/working?)	Base - unknown	Base - unknown				
Expansion vessel(s)	Not applicable	Not applicable				
Pressure reduction	Not applicable	Not applicable				
Tundish	Not applicable	Not applicable				
Samples	Not taken	Not taken				
Advice	GFWH 01 should be set to achieve recommended minimum temperature of 60°C					
Inspection & Maintenance	GFWH 02: Perform periodic blowdown & flush, noting: temperature, colour, viscosity & debris within water sample. Carry out a periodic internal inspection via the hatch and clean and disinfect as required.					
Observations	GFWH 01 has been offline for some time					
Legionella risk	GFWH 02 stores water at a non-compliant temperature					
Recommendations	Adjust GFWH 02 to achieve minimum temperature of 60°C	1 month				
Risk Rating	L-	L	L+	M	M+	H

### 13 Temperature

	Initial °C	1 minute °C	2 minutes °C	Stable °C	Time to Stable mins/secs
Mains nearest outlet	22.0		15.7		
Mains sentinel 1	22.0		10.4		
Mains furthest outlet	22.0		11.9		
Tank fed systems nearest outlets	22.0		16.2		
Tank fed sentinel 1	22.0		13.9		
Tank fed sentinel 2	22.0		14.4		
Tank fed systems furthest outlets	22.0		14.6		
GFWH 02 nearest sentinel	22.0	54.9			
GFWH 02 sentinel 1	22.0	51			
GFWH 02 sentinel 2	22.0	51			
GFWH 02 sentinel 3	22.0	51.8			
GFWH 02 furthest outlet	22.0	55.2			
Accessible WC scald protection	22.0	43.2			
Unisex change scald protection	22.0	39.3			
Male change scald protection	22.0	39.3			
Female change scald protection	22.0	39.1			
Tanning salon scald protection	22.0	42.3			
Creche scald protection	22.0	42.3			
Male WC scald protection	22.0	40.1			
Female WC scald protection x3	22.0	38.8 38.9 39.0			
Unisex WC scald protection	22.0	42.7			
Gym female WC scald protection x2	22.0	39.0 40.1			
Gym male WC scald protection	22.0	41.0			



<b>Advice</b>	<p>Cold water should be available at outlets at a temperature of 20°C or less within 2 minutes of opening the tap. Hot water cylinders and other larger water heaters should be set to achieve a storage temperature of 60°C. The return temperature of water in circulating hot water systems should not be below 50°C.</p> <p>Hot water should be available at outlets at a temperature of 50-60°C within 1 minute (not applicable to electric instant handwashes)</p> <p>Where scald protection devices (TMV's) are fitted the temperature at sinks and basins should be between 39°C and 43°C.</p> <p>Where TMV crossflow is identified the pressures of the hot and cold supply at affected outlets should be checked and balanced by adjusting (or installing) pressure reducing valves (PRV's) and/or installing double check valves (DCV's)</p>
<b>Observations</b>	All recorded temperatures are within parameters
<b>Legionella risk</b>	Temperature checks (and adjustment) are key to successful Legionella control and should be taken as detailed and at the frequencies shown in <b>Section 4 Control Scheme</b>
<b>Recommendations</b>	Temperature checks and adjustment are key to successful Legionella control and should be taken as detailed and at the frequency shown in <b>Section 20 Control Scheme</b>
<b>Risk Rating</b>	L- <b>L</b> L+ M M+ H

14 Showers  
& Sprays

	Installation 1	Installation 2	Installation 3
Type	TMV mixer	4 CTMV blended	6 CTMV blended
Location	Unisex change	Female change	Male change
Condition	Good	Good	Good
Use	Daily	Daily	Daily
Self-purging	No	No	No
Samples	Not taken	Not taken	Not taken

	Installation 4	Installation 5	Installation 6
Type	4 CTMV blended	Spray tap	4 spray taps
Location	Tanning salon	Unisex change	Male change
Condition	Good	Good	Good
Use	Daily	Daily	Unused
Self-purging	No	No	No
Samples	Not taken	Not taken	Not taken

Observations	All showers are presumed used daily					
Legionella risk	Showers are inherently high-risk installations as they produce breathable aerosol during normal use. Exposure times can be prolonged					
Recommendations	Inspect, clean & disinfect as required					3 months
Risk Rating	L-	L	L+	M	M+	H

	Installation 1	Installation 2	Installation 3
Type	Local TMV	Shower mixer TMV	Common TMV
Location	Unisex change	Unisex change	Male change
Condition	Good	Good	Good
Distance to supplied outlets	<2m	<2m	<2m
Evidence of crossflow	No	Unknown	No
Samples	Not taken	Not taken	Not taken

	Installation 4	Installation 5	Installation 6
Type	Common TMV blended showers	Common TMV	Common TMV blended showers
Location	Male change	Female change	Female change
Condition	Unknown	Good	Unknown
Distance to supplied outlets	>2m	<2m	>2m
Evidence of crossflow	Unknown	No	Unknown
Samples	Not taken	Not taken	Not taken

	Installation 7	Installation 8	Installation 9
Type	Common TMV	Common TMV blended showers	Common TMV
Location	Tanning salon	Tanning salon	Creche WC
Condition	Good	Unknown	Good
Distance to supplied outlets	<2m	>2m	<2m
Evidence of crossflow	No	Unknown	No
Samples	Not taken	Not taken	Not taken

	Installation 10	Installation 11	Installation 12
Type	Common TMV	2 local TMV's	Common TMV
Location	Male WC	Female WC	Female WC
Condition	Good	Good	Good
Distance to supplied outlets	<2m	<2m	<2m
Evidence of crossflow	No	Unknown	No
Samples	Not taken	Not taken	Not taken

	Installation 13	Installation 14	Installation 15
Type	Local TMV	local TMV	Common TMV
Location	Unisex WC	Gym female WC	Gym female WC
Condition	Good	Good	Good
Distance to supplied outlets	<2m	<2m	<2m
Evidence of crossflow	No	Unknown	No
Samples	Not taken	Not taken	Not taken

Installation 16	
Type	Common TMV
Location	Gym male WC
Condition	Good
Distance to supplied outlets	<2m
Evidence of crossflow	No
Samples	Not taken

<b>Crossflow</b>	If the hot and cold supplies to a TMV are not balanced (i.e. the hot and cold supply pressures are dissimilar) crossflow can occur and evidenced by a significant difference between the temperatures measured at outlets (without scald protection) and those measured at the source of supply. Crossflow results in compromised system temperatures and increased Legionella risk.					
<b>Advice</b>	<p>Scald protection devices (thermostatic mixing valves – TMV’s) use a temperature sensitive element to blend hot and cold water to a temperature that safeguards against the risk of scalding (typically 38-46°C) dependent on use. The blended water produced by TMV’s is at a temperature that promotes Legionella growth and increases exposure risk.</p> <p>A comparative assessment of scalding risk versus the risk of Legionella infection should therefore be considered and if the scalding risk is considered insignificant TMV’s are not required.</p> <p>There is a significant scalding risk where there is whole body immersion such as with baths and showers, particularly for the very young and elderly and TMV’s should be fitted at these outlets.</p> <p>TMV fitment to sinks and WHB’s is only necessary where used by the very young, the very elderly, the infirm or persons who are physically or mentally disabled.</p> <p>TMV’s (where fitted) should be located within 2m of the outlet and preferably incorporated within the tap body.</p>					
<b>Maintenance</b>	<p>Inspect (at least) annually and note supply temperature and flow at the outlet. Remove, clean and repair or replace as required.</p> <p>Where crossflow is identified, the hot and cold-water supply pressures should be brought into balance which may require the adjustment or installation of Pressure Reducing Valves (PRV’s).</p>					
<b>Legionella risk</b>	TMV’s are considered to have an increased Legionella risk as the blended water produced is at a temperature that promotes Legionella growth and should only be fitted where a significant scalding risk is identified. TMV’s located >2M from served outlets have an excessive amount of blended pipework, providing Legionella bacteria with conditions ideal for proliferation.					
<b>Observations</b>	Changing room common shower TMV’s are presumed located above false ceilings.					
<b>Recommendations</b>	Consider flushing twice weekly TMV’s located >2M from served outlets. Improve access to male WC TMV installation				Twice weekly 12 months	
<b>Risk Rating</b>	L-	L	L+	M	<b>M+</b>	H

**16 Dead Legs & Dead Ends**

	Location 1	Location 2
<b>Describe</b>	Mains fed dead end	Tank fed dead end
<b>Type</b>	22mm copper	28mm copper
<b>Length</b>	10cm	20cm
<b>Access</b>	Good	Good
<b>Cut back?</b>	Yes	Yes

<b>Advice</b>	<p>Pipework dead legs are created when outlets fall out of use or isolated at service valves.</p> <p>Dead ends result from cut and capped pipework leaving a length of pipework of unacceptable length without flow.</p> <p>ACoP L8 and water suppliers require that dead legs and blind ends are cut back to the nearest point of flow. As a guide, the pipework should be cut back if the affected length is more than twice the diameter of the pipe.</p>					
<b>Maintenance</b>	-					
<b>Observations</b>	Other dead legs: LPHW feed & expansion tank inlet is a dead leg (low draw off).					
<b>Legionella risk</b>	The dead legs & dead ends noted during the assessment are considered significant.					
<b>Recommendations</b>	<p>Dead legs and dead ends should be cut back whenever discovered as a matter of routine</p> <p>Cut back dead ends to point of flow</p> <p>Other dead legs: See section – Contractor Task Recommendations</p>					<p>Routine</p> <p>1 month</p>
<b>Risk Rating</b>	L-	L	L+	M	M+	H

17 Low Use

	Accessible WC	Male change	Female change			
Type	Cold tap	Cold taps	Cold taps			
	Tanning salon	Creche WC	Male WC			
Type	Cold taps	Cold taps	All outlets			
	Female WC	Unisex WC	Gym female WC			
Type	All outlets	All outlets	All outlets			
	Gym male WC					
Type	All outlets					
Advice	The water supply to low use outlets quickly settles to ambient temperature and can stagnate over time creating a contamination risk to other outlets served by the same pipework run					
Maintenance	Low use outlets should be flushed thoroughly on a regular basis or consideration given to removing the outlets and cutting back the supply pipework to the nearest point of flow					
Legionella risk	Standing water at ambient temperature, discolouration, stagnation & debris accumulation					
Observations	No evidence of a flushing regime					
Recommendations	Use a thermometer when flushing outlets and run the tap until the temperature measurement stabilises		Weekly			
Risk Rating	L-	L	L+	M	M+	H

18 Other Systems  
HSG274 P2

Not installed

**19 Assessment System Type**

1	Mains throughout. Hot water supplied by instant or very low volume (15li or less) storage (POU) heaters
2	Mains throughout. Hot water supplied by non-storage combination (combi) boiler or similar heat exchanger and low volume (100li or less) unvented storage water heater supplying small systems
3	Mains throughout. Hot water supplied by non-storage and unvented (250li or less) storage water heater supplying small to medium sized systems
4	Mains or tank fed hot and/or cold-water services incorporating non-storage, vented and unvented storage water heater installations (including combination heaters) supplying small and medium sized systems
5	Mains or tank fed hot and/or cold-water services with recirculation supplying medium to large systems
6	Mains or tank fed hot and/or cold-water services without recirculation supplying medium to large systems

**System Compliance**

C	Compliant hot & cold-water services: <ul style="list-style-type: none"> <li>Hot water stored at 60 (+/- 3) °C</li> <li>Hot water supplied to outlets at 50-60 (+/-3) °C within 1 minute (no temperature requirement for instant handwash installations)</li> <li>Cold water supplied to outlets at less than 20°C within 2 minutes of opening the outlet</li> <li>Compliant cold-water storage tank installation (where fitted) storing at less than 20°C and supplying cold water of a similar quality to the mains supply</li> </ul>
NCT	Non-compliant hot or cold-water storage temperatures or not achieving compliant temperatures at outlets within the specified time (hot water one-minute, cold water two minutes)
NCF	Faulted hot and/or cold-water supply

**Proliferation Risk**

Section	Topic	Impact					
10	Pipework etc.	L-	L	L+	M	M+	H
11	Water tanks	L-	L	L+	M	M+	H
12	Water heaters	L-	L	L+	M	M+	H
13	Temperature	L-	L	L+	M	M+	H
14	Showers & Sprays	L-	L	L+	M	M+	H
15	Scald protection	L-	L	L+	M	M+	H
16	Dead legs etc.	L-	L	L+	M	M+	H
17	Low use	L-	L	L+	M	M+	H
18	Other systems	L-	L	L+	M	M+	H

**Aerosol Exposure**

LE	Low exposure risk	No showers or other aerosol generator in use
ME	Moderate exposure risk	Low to moderate use of showers or another aerosol generator
HE	High exposure risk	Low to high use of showers or another aerosol generator

**20 Control Scheme**

The following recommendations follow the HSE's technical guidance with monitoring tasks and frequencies adjusted as necessary to suit the Legionella risk identified during the assessment process. **(Reference: HSG 274 P2 para 2.79)**

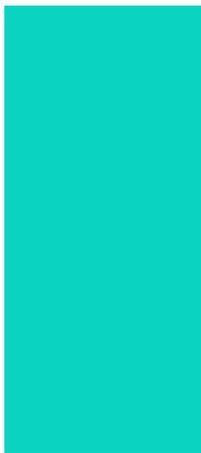
The recommendations may include for additional control measures such as microbiological sampling to achieve an acceptable level of control. All actions should be noted in the logbook and records kept for a 5-year period.

<b>Records</b>	<b>Site: Logbook &amp; Electronic</b>	An electronic system is in use with a client portal (IWS) - not audited at the time of the assessment No access to site logbook
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**Domestic Systems – Recommended for completion (& Control Scheme record entry) by members of staff**

<b>Flushing (records in site logbook)</b>	<b>Weekly Twice weekly (showers)</b>	Identify and flush through low use outlets thoroughly (for 2-3 minutes). Cold taps where a separate hot tap is blended by a TMV are considered infrequently used (all WC WHB's). Recommended: flush until the measured temperature stabilises using a thermometer. GFWH 01 isolated valves should be opened weekly to purge stagnant water. Recommended: TMV's located >2M from served outlets have an excessive amount of blended pipework, providing Legionella bacteria with conditions ideal for proliferation; consider flushing twice weekly (if not in frequent use). Important: It should be noted that showers pose the highest risk to Legionella control as they generate an aerosol when operated; Legionella bacteria can be inhaled into the body within the aerosol water droplets. Where the showerhead is 'fixed' in place, the preferred method is to tie a perforated bag over the showerhead before purging.
<b>Control Scheme &amp; Risk Assessment review</b>	<b>12 months</b>	Responsible Person is required to periodically audit suitability of control scheme documentation. Both are considered to be 'living documents' & subject to any significant changes i.e. system, building use, change of management etc.

Contractor Task Recommendations (including Control Scheme record entry)/Remedials		
GFWH 01 elimination	Review at or before next assessment	Consider disconnecting unit, ensuring all associated pipework is cut back to the point of flow.
Pipework labelling (GFWH 01)	Advisory	label associated CWST 01 pipework in accordance with British Standard BS 1710:2014 pipe marking standard.
Flexible Hoses	Advisory	Confirmation is recommended to determine if the flexible pipework is WRAS approved; either by checking for approval markings or contacting the manufacturer. Consider replacing non-approved hoses with WRAS approved or ideally with hard pipework i.e. copper/plastic. Of note, some assets require flexible hoses for access i.e. height adjustment/vibration/access and should be left in place. To comply with Water Supply (Water Fittings) Regulations 1999, mains connections to appliances via non-approved flexible hoses, require the installation of a type EA/EB device after the servicing valve.
Common TMV's	Advisory	In order to reduce the likelihood of Legionella colonisation, consider replacing common TMV's with local units. These should be fitted within 2 metres of served outlets (as recommended).
Water Heaters Circulating Storage Systems >15li Storage Capacity (GFWH 02)	Monthly	Check the flow and return pipework temperature Recommended: Use a K type thermometer and surface probe as fitted gauges can be inaccurate or measure the temperature at the nearest outlet. Adjust the controls to store at 60°C if required. Measure pipework temperatures of circulating loops and identify any faults. The return should be at least 50°C.
Hot Water System Outlets	Monthly	Check the temperature of the sentinel outlets shown in <b>Section 7 Asset Register</b> . Note the minimum recorded temperature achieved within 1 minute. Should achieve at least 50°C
Cold Water System Outlets	Monthly	Check the temperature of the sentinel outlets shown in <b>Section 7 Asset Register</b> . Note the minimum recorded temperature achieved within 2 minutes
Male WC child WHB	1 month	Further investigation required to ascertain lack of flowing hot/cold water at outlets
Dead Legs & Dead Ends	1 month	Cut back dead end & pipework to point of flow. The cold feed to a LPHW feed & expansion tank is a dead leg as the system draws off water at a low rate. The installation of a non-return valve as close as possible to the point of flow, will remove this Legionella amplification risk.
CWST 01	1 month	Clean and disinfect surfaces to remove sediment (potential nutrient sources for Legionella bacteria). Ensure all microbial black spots are removed from internal surfaces. Repaint internal surfaces where finish has become porous. Repair old vent pipe hole with a WRAS approved material. Fit a lid vent to existing hole in hatch.
Showers	3 months	Clean and disinfect showerheads & hoses as required
Outlet Scaling	3 months	Inspect and descale as required. Heavily scaled outlet fittings may require replacement.
GFWH 02 inspections	12 months	Inspect for correct operation, sample and flush to drain. Carry out an internal inspection via the hatch and clean and disinfect as required.



<b>CWST 01 Inspections</b>	<b>12 months</b>	Check stored water and makeup temperature (during summer). Should achieve below 20°C. Inspect water tanks internally & externally noting condition & report issues.
<b>TMV access</b>	<b>12 months</b>	The panel concealing the TMV in the male WC is difficult to remove. Ensure this is easily accessible for ongoing maintenance and servicing.
<b>Scald Protection (TMV's)</b>	<b>12 months</b>	Check for correct operation and outlet temperature which should be between 39°C & 43°C. Clean & de-scale; failsafe check.
<b>Hot &amp; Cold-Water Systems</b>	<b>12 months</b>	Annual all outlet temperature check
<b>Risk Assessment review</b>	<b>24 months</b>	(12, 24 or 36-months based upon the risk profile identified)

## 21 Background

Legionellosis is the term used for infections caused by *Legionella pneumophila* and other bacteria from the family *Legionellaceae*. Legionnaires' disease is a pneumonia that particularly affects those who are susceptible due to factors such as age, illness, immunosuppression and smoking. It may be fatal. Legionellae can also cause less serious illnesses such as Pontiac and Lochgoilhead fevers that can affect all people. Infection is attributed to inhaling Legionellae in water droplets that are small enough (<5 µm) to penetrate deeply into the lung.

*Legionella pneumophila* is of concern because it is widespread in natural water sources and multiplies rapidly in the conditions found in some water systems. It is released into the air in water droplets and so may spread by several processes commonly found in the built environment.

Systems that can harbour *Legionella* and release contaminated droplets into the air include cooling towers, evaporative condensers, humidifiers, domestic water systems, spa pools, sprinklers, hose reels, lathe coolants, fountains, vehicle washes and horticultural misting.

As a result of several outbreaks of legionellosis, resulting in multiple fatalities, the Health & Safety Commission (a public body which later merged with the Health & Safety Executive) deemed it necessary to define the requirements of the Control of Substances Hazardous to Health Regulations (COSHH) by means of an Approved Code of Practice (ACoP). The 1<sup>st</sup> edition was published in 1991. The current (2013) edition is the 4<sup>th</sup>.

## 22 Legislation

The requirement for a *Legionella* risk assessment arises from The Health & Safety at Work etc. Act 1974 (HSWA), Management of Health and Safety at Work Regulations 1999 (MHSWR) and the Control of Substances Hazardous the Health Regulations 2002 (COSHH) and is embodied in the ACoP.

The ACoP was most recently revised in 2013 and at the same time three associated guidance documents (HSG274 parts 1-3) were published replacing Part 2 of the previous edition of the ACoP.

The assessment considers these revisions and other relevant regulations, standards and technical guidance, including the Water Supply (Water Fittings) Regulations (or regional equivalents), HTM 04-01, HTM 01-05, BS8580, BS7592, CIBSE TM13 and the Water Management Society and BSRIA Guides to *Legionella* Risk Assessment.

Section 22 of the ACoP states:

"This Approved Code of Practice" applies to the control from *Legionella* bacteria, in any undertaking involving a work activity. It applies to premises controlled in connection with a trade, business or other undertaking where water is used or stored and where there is a means of creating and transmitting water droplets (aerosols) which may be inhaled, causing a reasonably foreseeable risk of exposure to *Legionella* bacteria."

Few non-domestic premises where water is supplied escape the need for a risk assessment.

In most buildings with water services, building managers are required to comply with the ACoP. If the site has wet cooling towers, then the Notification of Cooling Towers and Evaporative Condensers Regulations 1992 will also apply.

The ACoP has special legal status. It states:

"If you are prosecuted for breach of health and safety law and it is proved that you have not followed the relevant provisions of the Code, a court will find you at fault, unless you can prove that you have complied with the law in some other way."

All persons responsible for water systems are strongly advised to hold a copy of the ACoP and HSG274 for reference.

This risk assessment is intended to assist the client to demonstrate compliance with the ACoP. In order to comply with their legal duties, employers (and others) should:

- Identify the source of the risk
- Prepare a scheme for preventing or controlling the risk
- Implement and manage precautions
- Keep records of the precautions implemented
- Appoint a person to be managerially responsible (the “responsible person”).

In the event of an HSE inspection or investigation, the absence of an up to date risk assessment could be sufficient grounds for prosecution even if the employer’s safeguards might otherwise appear satisfactory. Even where the employer has fewer than five employees and therefore there is no legal requirement for the risk assessment to be documented, it is strongly recommended that this is done, however briefly.

## 23 Management

In order to be effective, the risk assessment must be carried out within a well-defined management framework that allocates specific responsibilities to individuals and provides the mechanism for implementing recommendations. These individuals become responsible under the law and therefore must have adequate authority and resources to implement essential risk reduction measures.

In the case of new buildings, the duty holder assumes legal responsibility for the risk systems at handover.

In the case of existing buildings, the duty holder assumes legal responsibility for the risk systems when the lease or freehold is transferred to the employer. The duty holder may then:

- Appoint a responsible person to manage or oversee the risk systems on a daily basis
- Appoint a competent risk assessor to carry out the initial and periodic risk assessments (if they themselves or the appointed responsible person do not have the competence to do so).

Where no prior risk assessment is available, or the building is newly acquired the process starts with the initial “in use risk assessment”.

## 24 Assessment Methodology

Where no prior risk assessment is available, or the building is newly acquired the process starts with the initial “in use risk assessment”.

Legionella risk assessments follow the standard structure of other risk assessments, but the assessor applies his knowledge of Legionella bacteria and of water systems to that structure.

The assessor will:

### Identify the Hazard

In this case the hazard is Legionella bacteria (especially Legionella pneumophila serogroup 1) as it may not be known if the bacteria are present in the system (unless specifically sampled for Legionella) the approach is to assess each water system to determine the likelihood of contamination of the supply and if conditions would allow for Legionella proliferation if present.

### Assess the Risk

If the system contains water at temperatures that will allow growth (20-50°C) and can generate aerosol under any foreseeable circumstance (operation or maintenance) then it is a potential risk system. The level of risk may increase with:

- The presence of nutrients including rust, biofilm, airborne contamination (e.g. dust, pollen), organic contamination (e.g. insects, birds, oil, solvents, leaks from processes)
- The length of time that conditions supporting growth prevail. In hot and cold-water systems this is often referred to in terms of water movement versus stagnation, but this should not be confused with simple motion. What is significant is the rate of dilution with fresh water from the supply
- The amount of aerosol produced and the time it is produced over
- The degree of dissemination of the aerosol into the atmosphere
- The humidity of the environment (*Legionella pneumophila* can survive for hours in high humidity)
- The number of people exposed to the aerosol
- The susceptibility of those exposed to infection (susceptibility increases with age, smoking, lung and heart conditions, blood disease, diabetes, cancer and any condition or treatment which depresses the immune system)
- The exposure times
- Temperatures between 20 and 50°C (the greatest increase in growth occurs between 32 and 42°C)
- The presence or absence of a disinfectant (biocide)

Having identified the risk, the assessor is able to consider and comment upon the following:

### Risk Elimination or Substitution

If it is judged that a system is a risk system, the owner may be advised to consider elimination or substitution with a lower risk system

### Minimisation of the Risk

If the assessment shows a significant risk, precautions should be put in place to reduce the risk to a minimal level 'as far as is reasonably practicable'

### Management of the Precautions

A written management and control scheme should be in place or introduced to ensure all required precautions are fully implemented and maintained (in hospitals this is within the Water Safety Plan)

### Monitor the Precautions

The checks required to ensure the precautions remain effective will need to be identified along with the frequency that these checks are undertaken

### Recording the Results

All results of tests, measurements, checks and remedial works required and carried out should be recorded and the results kept for five years

### Reviewing and Auditing on a Regular Basis

*Legionella* risk assessments should be reviewed regularly and specifically where there is reason to doubt the validity of the assessment in which case it should be reviewed immediately

Management and communication procedures should also be reviewed, and audits carried out between assessment reviews. Audits give an indication to management of the necessity to update or renew the risk assessment

Assessors use their knowledge and experience both to determine the degree of risk and to make practical recommendations to control any residual risk identified. The numbers and susceptibilities of those exposed to any aerosol and the effectiveness of any existing risk management and control schemes are considered. All recommendations made to minimise the risk are prioritised, with suggested timescales for action

## 25 Water Supply Regulations

The Water Supply (Water Fittings) Regulations 1999 (and regional equivalents) are not directly concerned with the risk from Legionella bacteria but govern the design, construction and use of materials in water systems and may have a positive influence in reducing Legionella risk. The regulations include requirements for backflow protection, i.e. the use of devices such as air gaps and non-return valves to protect the supply, the maintenance of water quality, the use of materials that do not promote organic growth and water conservation.

Where relevant, the assessor will comment on compliance issues relating to these Regulations identified during the assessment and make suitable recommendations for compliance

## A1 LCA Code of Conduct

Legislative requirements for the control of Legionella put the responsibility for compliance clearly with the owner/operator of water systems. Under the Health and Safety at Work etc Act 1974 and the control of Substances Hazardous to Health Regulations as regards risks from Legionella, all owners and operators of such systems have a responsibility to ensure that the risk is controlled and kept to an acceptable level.

The HSE Approved Code of Practice and guidance on regulations (L8) stresses that whilst the tasks required to be undertaken to control the risk may be contracted to an external specialist, the owner/operator must take all reasonable care to ensure the competence of the service provider to carry out the work on his behalf.

The Legionella Control Association (LCA) Code of Conduct is intended to give guidance in respect of the standards of service management that a client should expect from service providers who agree to abide by the Code.

The responsibility for the prevention and control of Legionella lies with the client and the service provider.

The guidelines outlined in the Code have been designed to help owner/operators select a service provider by highlighting nine critical areas and detailing the commitments that the owner/operator should expect.

The Code requires Watertec to establish an auditable management system for the provision of services associated with the control of Legionella. A valid certificate is an indication of the registrant's commitment to comply with the Service Provider Commitments of the Code and a successful audit.

Watertec are required by membership of the Legionella Control Association to bring the Code of Conduct to the attention of our clients and supply a copy of our most recent Certificate of Registration.

A copy of the Code can be obtained from the LCA website by following this link:

[https://www.legionellacontrol.org.uk/\\_data/pdf/a-code-of-conduct-for-service-providers-70118-06-18.pdf](https://www.legionellacontrol.org.uk/_data/pdf/a-code-of-conduct-for-service-providers-70118-06-18.pdf)

A copy of Watertec's most recent Certificate of Registration is included at Appendix A2.



# Legionella Control Association

A Code of Conduct for Service Providers

## Certificate of Registration

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

Name of Company: **Watertec Compliance Solutions Ltd**

Registration Number: **2011/2119** Certificate valid until: **31st August 2019**

Registration under the following services categories:

**(1) Legionella Risk Assessment Services**

- 1.1 Hot and Cold Water Services
- 1.2 Evaporative Cooling Systems
- 1.3 Process and Other Systems
- 1.4 Healthcare Risk Assessment

**(3) Hot and Cold Water Monitoring and Inspection Services**

**(4) Cleaning and Disinfection Services**

**(6) Training Services**

**(7) Legionella Analytical Services**

- 7.1 Sampling
- 7.2 Laboratory Analysis
- 7.3 Interpretation of Analysis

**(8) Plant and Equipment Services**

- 8.1 Installation
- 8.2 Refurbishment
- 8.3 Servicing
- 8.4 Design and Supply

**This Certificate is only valid if the Company named is listed on the LCA website [www.legionellacontrol.org.uk/directory.php](http://www.legionellacontrol.org.uk/directory.php)**



Signed:

Chairman, Executive Committee



Certificate Secretary

**Legionella Control Association Limited. [www.legionellacontrol.org.uk](http://www.legionellacontrol.org.uk)**

Registered in England and Wales No. 8502723

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