



University  
College of  
Osteopathy

## Prevention Control of Legionella – Risk Assessment



## PREVENTION AND CONTROL OF LEGIONELLA

### RISK ASSESSMENT

#### CONTENTS

1. Borough High Street .....	3
1.1 Description of site, water systems and usage.....	3
1.2 Building usage .....	3
1.3 Possible areas of risk .....	3
1.4 Sentinel Taps.....	3
1.5 Monitoring programme .....	4
2. Southwark Bridge Road .....	5
2.1 Description of site, water systems and usage.....	5
2.2 Building usage .....	5
2.3 Possible areas of risk .....	5
2.4 Monitoring programme .....	5

## 1. BOROUGH HIGH STREET

### 1.1 DESCRIPTION OF SITE, WATER SYSTEMS AND USAGE

The site is a 35,000 sq ft, five storey building built in 1963 and occupied by the University College of Osteopathy (UCO) since 1997. The building is used for teaching, training and administration.

The water systems are for domestic use only i.e. toilet, washing and kitchen facilities.

There is one large cold water storage tank (CWST) located in the roof-space plant room which supplies all the domestic cold water services (DCWS) and one calorifier (CAL), located in the basement and which supplies all the domestic hot water services (DHWS). In the winter when the heating is on, the boilers are used to heat the water and in the summer when the heating is off, immersion heaters are used in their place. There is a feed and expansion tank located in the roof-space plant room as well as six showers (S1-S6) and various chilled drinks units (CDU).

Whilst showers readily create breathable water droplets, regular flow from taps can also create droplets through splash back. In July 2009, flow restrictors were fitted to all taps in order to reduce wastage and conform to the Water Supply (Water Fittings) Regulations 1999. This has the added benefit of reducing the force of water hitting the sink and therefore reducing the volume of water and the force of splash back. Although this reduces the risk, it does not eliminate the need to perform regular checks on the water temperature.

The majority of unused outlets have been removed with the exception of the sink in the external cleaners' cupboard which is flushed through weekly.

There is a list of all systems in the Asset Register and further details in the individual survey sections of the log book, together with photographs where appropriate.

### 1.2 BUILDING USAGE

The building is open 7 days a week, with the part time course and CPD courses running on the weekend. Whilst the building is used all year, the building is quieter during vacation periods.

### 1.3 POSSIBLE AREAS OF RISK

The following areas were identified as a source of risk:

- Cold Water Storage Tank (CWST)
- Calorifier (CAL)
- Showers (S1-S6)

### 1.4 SENTINEL TAPS

Sentinel taps are the furthest and nearest taps on the water system.

- For the cold water storage tank, these fall in the fourth floor female sinks and the first floor female sinks.
- For the hot water system, these fall in the fourth floor female sinks and the ground floor female sinks. As these sinks are fitted with mixer taps, the first single hot tap on the system is also measured – this occurs in G.01.

- The sentinel taps for the mains fed water are also tested. These fall in the staff room in 4.01 and G.01 (due to the mixer taps in the female ground floor toilets).

## 1.5 MONITORING PROGRAMME

In order control the risk of Legionella bacteria multiplying and contaminating the water supply there are several monitoring checks which must be undertaken:

Frequency	Type of monitoring	Method
Weekly	Flush through of little used outlets these are in the external cleaner's cupboard and the SU bar (vacation periods only)	In-house
Monthly	Check the temperature is below 20°C after running water for up two minutes at the cold water sentinel taps	In-house
	Check temperatures of stored water, flow and return at calorifier	In-house
	Check water temperature reaches 50°C within one minute at the hot water sentinel taps	In-house
	Check the temperature from the mixer sentinel taps is between 38°C and 43°C.	In-house
Quarterly	LTHW sampling	Contract
	Closed system on site analysis	Contract
	Temperature checks from representative number of outlets	Contract
	Clean and chlorination of shower heads	In-house
Six-monthly	Cold water storage tank inspection including temperatures	Contract
	Microbiological sampling	Contract
	Potable samples	Contract
Annually	Log book audit	Contract
	Calorifier blowdown	Contract
	Thermostatic mixing valve service	Contract
	Clean of water tank as necessary	Contract

## 2. SOUTHWARK BRIDGE ROAD

### 2.1 DESCRIPTION OF SITE, WATER SYSTEMS AND USAGE

The UCO clinic occupies the 12,000 sq ft ground floor of a newly built, multipurpose building. The building was acquired as a shell and fitted out for purpose, opening in April 2008. There are 34 treatment rooms, four team rooms and 2 tea points, each with a sink.

There is a Cold Water Storage Tank (CWST) in the basement of the building which serves all the commercial and residential units. In the case of the UCO, this feeds the modular boiler (MB1) in the plant room which heats water to feed the Calorifier (CAL1), roof mounted air-handling unit (AHU1), LST panel radiators and all taps, toilets and the shower (S1).

There is a list of all systems in the Asset Register.

### 2.2 BUILDING USAGE

The building is used by staff, students and patients and is open 8am-8.30pm Monday to Friday and 8am-12.30pm on Saturdays. The clinic sees 35,000 patients per year. The throughput of students and patients is consistent throughout the year.

### 2.3 POSSIBLE AREAS OF RISK

The following areas have been identified as areas of risk:

- Calorifier (CAL1)
- Modular Boiler (MB1)
- Shower (S1)
- Air Handling Unit (AHU1)

### 2.4 MONITORING PROGRAMME

In order to minimise the risk of Legionella bacteria multiplying and contaminating the water supply there are several monitoring checks that must be undertaken:

Frequency	Type of monitoring	Method
Monthly	Check the temperature is below 20°C after running water for up two minutes at the cold water sentinel taps	In-house
	Check temperatures of stored water, flow and return at calorifier	In-house
	Check water temperature reaches 50°C within one minute at the hot water sentinel taps	In-house

Quarterly	Clean and chlorination of shower heads	In-house
Six-monthly	Cold water storage tank inspection including temperatures	Managing Agent
	Microbiological sampling	Managing Agent
	Potable samples	Managing Agent
Annually	Log book audit	Contract
	Calorifier blowdown	Contract
	Thermostatic mixing valve service	Contract