



Prevention and Control of Legionella Policy: Risk Assessment



PREVENTION AND CONTROL OF LEGIONELLA

RISK ASSESSMENT

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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 also 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 works in July 2009 also involved removing all unused outlets and cutting back all redundant pipework and dead-legs thereby reducing the risk of stagnant water forming. Removing unused outlets eliminates the requirement of a weekly flush through.

There were Fire Hose Reels on each floor which were capped off as part of the works to the water system in July 2009. As there was no water flow to them, they were not maintained as part of the Legionella control programme. Due to a review of the Fire Risk Assessment in 2015 which highlighted they should be decommissioned if not in use, they were removed from the building in August 2015.

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

1.2 BUILDING USAGE

The building is used by approximately 165 staff and 500 students although it is unlikely this number will be on site at any one time.

The site is used all year round with fewer people in the building during the 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) Replaced 2016
- 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 to control the risk of Legionella bacteria multiplying and contaminating the water supply there are several precautions which the UCO must undertake:

Monthly

- Check the temperature is below 20°C after running water for up to two minutes at the cold water sentinel taps
- Check temperatures of stored water, flow and return at calorifier
- Check water temperature reaches 50°C within one minute at the hot water sentinel taps
- Check the temperature from the mixer sentinel taps is between 38°C and 43°C.

Quarterly

- Dismantle, clean and descale showerheads and hoses

Six-monthly

- Check the tank temperature remote from ball valves and mains temperature at ball valves

Annually

- Visually inspect cold water storage tanks and carry out remedial works as necessary
- Inspect the water in the tanks. The surfaces should be clean and shiny and the water should not contain any debris or contamination. If necessary they should be cleaned and disinfected
- Visual check on internal surfaces of the calorifier for scale and sludge where possible and cleaned where necessary
- Samples to be taken from the hot water calorifier where possible to note the condition of the drain water

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. The clinic sees 40,000 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 precautions the UCO must put in place. As well as carrying out their own checks and monitoring the system they must ensure the Managing Agents for the building are monitoring the CSWT in the basement. The UCO is responsible for performing the following checks:

Monthly

- Check the temperature at the cold water sentinel taps is below 20°C after running water for up two minutes.
- Check temperatures of flow and return at calorifier.
- Check water temperature reaches 50°C within one minute at the hot water sentinel taps.

Quarterly

- Dismantle, clean and descale showerheads and hoses.

Six-monthly

- Acquire data from Managing Agent confirming relevant tests to water are carried out.

Annually

- Visual check on internal surfaces of the calorifier for scale and sludge where possible and cleaned where necessary.
- Samples to be taken from the hot water calorifier where possible to note the condition of the drain water.