Water systems in closed businesses and buildings – What should I consider?

Due to the current Covid-19 pandemic many businesses have had to close their business premises, especially 'non-essential' businesses, for example: beauty salons/hairdressers/barber shops, pubs, restaurants, hotels, spas, dental surgeries, churches, youth hostels, campsites, dog grooming salon, community centres, offices etc. It is essential A water system in building is monitored and operated correctly in 'normal times' but the current pandemic creates even more focus on the safety of water systems due to inactivity. Different building types have different requirements, typically larger buildings have more complex systems requiring more rigorous monitoring.

Covid-19 causes problems for a person's respiratory system, this also makes the person with Covid-19 high risk to the effects of legionella bacteria as legionella bacteria also affects the respiratory system (legionella bacteria can be inhaled through tiny breathable droplets of water called aerosols) and could have devasting effects on a person with Covid-19.

As businesses have shut their premises down this now means that water systems may be left unused. the building Water systems usually have a high turnover of water usage in normal conditions. This turnover of water promotes the 'flushing' of water and limits the possibility of water 'standing' and becoming a risk due to bacterial growth. Temperatures within the building and water systems may also be a factor that will increase risk of bacterial growth especially in warmer periods of the year. The warmer periods of the year can warm the cold water which can promote the growth of bacteria within the water system.

Dutyholders (building owner / building operator) have a responsibility to ensure water systems do not become a risk to the people within the building. When the buildings open again after the 'lockdown' it is essential that the water systems are safe to operate. It is advised that the usual regime of monitoring the water system in line with the risk assessment should be carried out during the 'lockdown' period if possible. If this is not possible due to the Covid-10 pandemic reasonable **steps should be taken to ensure the water system is safe to use before the building becomes occupied again.** Each water system is required to be assessed to identify any possible risk. It may also be required that dutyholders re-visit their water system risk assessments to ensure it accommodates for 'lockdown' situations in the future.

Of course, all buildings are different with different requirements to the uses of the plumbing system within. Suitably competent people or businesses should be engaged to ensure that any water system within a building is safe to operate once the building opens for business again. Ideally the water system should be risk assessed prior to the building opening, this may mean engaging with a plumbing business to ensure the risk assessment and any associated work can be carried out before the building opens for business. Legionella is not the only risk to health, there can also be other such risks from plumbing systems and appliances.

A quick guide to possible risks in your building: Plumbing (this guide is not exhaustive and guidance should be sought from a competent person, each water system will be required to be risk assessed on a case by case scenario to ensure safety).

Situation	Risk
No water usage in the shutdown period	Standing water is at risk at becoming stagnant and promotes bacterial growth. Standing water can also be effected by environment temperature, for example if a pipe is located in warm area of a building.
Water temperatures	• Hot water vessels may not have been heated to kill off legionella bacteria. • cold water supplies/storage tanks may have warmed – promotes bacterial growth
Non-approved materials (some water fittings are not permitted to be used on clean water supplies. There are many non-approved materials on the market, your qualified plumber can provide guidance on this)	• Lead pipework – many old buildings may still contain lead, if water has been standing in a lead pipe for long periods there is likely to be a higher lead content in the standing water • Other metallic materials • Non-metallic materials No-approved materials can contaminate the water supply
Sanitary appliances	Appliances such as sinks, basins, baths, showers and toilets may require the water seal traps (U-bends) to be replenished with water. They may have dried out during the closure of the building. The U-bends should be slowly toped up with water by hand to stop possible splashing of bacteria – especially in healthcare facilities
Shower hoses / heads	Water in shower hoses, this water is usually delivered at a comfortable temperature for the user. The comfortable temperature is a perfect temperature to promote conditions ideal for bacterial growth. Shower heads can produce aerosols when used, aerosols are airborne droplets of fluid that can carry legionella bacteria.
Outside taps and hoses	If a hose pipe has been left full of water, it may have become warmed and stagnant. Handheld hoses can produce aerosols when used, aerosols are airborne droplets of fluid that can carry legionella bacteria. The stagnant water could also backflow into the building.
Fuel burning appliances	All fuel burning appliances should be inspected by a **competent person** if you are in any doubt they are not working correctly. At times appliances can fail due to inactivity.
Heating and hot water systems	At times of inactivity heating and hot water systems may fail to operate once re-started. A qualified plumber can again offer guidance and support if you are in any doubt the system is not operating correctly.

As there is such a wide range of building types with a varying requirement of water system within those buildings each water system and building will be required to be assessed on a case by case scenario. Qualified plumbers can be found www.snipef.org

www.needaplumber.org www.watersafe.co.uk www.gassafe.co.uk www.scottishwater.co.uk www.NIwater.co.uk www.oftec.co.uk www.hetas.co.uk