

BIRMINGHAM CITY COUNCIL

**REPORT OF THE DIRECTOR OF
REGULATION AND ENFORCEMENT
TO THE LICENSING AND PUBLIC PROTECTION COMMITTEE**

16th NOVEMBER 2022
ALL WARDS

**Commonwealth Games Legionella Assurance
in Hotel Accommodation Premises**

1. **Summary**

- 1.1 Birmingham was the host City for the 2022 Commonwealth Games (CWG) which ran from 28 July 2022 to 8 August 2022. Many visitors were expected to use overnight accommodation such as hotels, guest houses and B&B establishments during the games period.
- 1.2 The report advises Committee of a project coordinated by the United Kingdom Health Security Agency (UKHSA) undertaken by Councils to ensure that legionella was not likely to be a risk from such accommodation.
- 1.3 The reason for the project was that following the lockdowns necessitated to control covid, many hotels and similar facilities had not been used intensively for a long period of time. As a result, water potentially was not being drawn through taps and showers regularly and the longer these lay dormant the greater the potential for legionella to be present. For this reason, this was a proactive and timely assurance project targeted at preventing the occurrence of legionella from a sudden demand in overnight accommodation.

2. **Recommendations**

- 2.1. That the report is noted.

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3. Background

- 3.1 Legionnaires Disease is a pneumonia which causes serious respiratory illness. It occurs when aerosolised water droplets containing Legionella bacteria are inhaled. Waterborne Legionella pneumophila is the most common causative organism and is associated with outbreaks linked to poorly maintained water systems. Since most cooling systems have moved away from using cooling water, water systems in buildings now provide environments most conducive to the growth and dissemination of Legionella and represent the most likely source of any outbreak.
- 3.2 The infective dose is unknown but assumed to be low, as illness has occurred after short exposures. Mostly legionella is linked to the inhalation of contaminated aerosols, therefore human to human transmission does not occur.
- 3.3 Symptoms include fever, loss of appetite, headache, malaise, lethargy, muscle pain, diarrhoea and confusion. There is usually an initial mild cough, but as many as 50% of patients can present phlegm. Blood-streaked phlegm or hemoptysis occurs in about one-third of the patients. The severity of disease ranges from a mild cough to a rapidly fatal pneumonia. Overall, the death rate is usually within the range of 5–10%.
- 3.4 The Legionella bacteria can naturally enter man made water systems due to its environmental presence. Smaller and newer systems are generally lower risk but prevention is achieved by limiting the growth of legionella bacteria in building water systems. Legionella will often grow where there is no flow of water. These could be old pipes which have been cut off leaving a short pipe which has been capped known as a dead leg. Additionally unused taps and shower heads do not have a flow of water, hence they can have a growth of bacteria overtime. Showers by their very nature produce aerosols and therefore need to be managed when not used for long periods.
- 3.5 There is a duty under the Health and Safety at Work legislation to manage all risks associated with a business and one of these risks, is the management of legionella. The Health and Safety Executive publishes guidance on this. [Legionnaires' disease. The control of legionella bacteria in water systems \(hse.gov.uk\)](https://www.hse.gov.uk/legionnaires-disease/). The powers to enter premises, take samples and require improvements if any failings were found therefore lies with your Committees Environmental Health Officers, duly authorised under the above Act.

4. Overview

- 4.1. The sampling project aimed to obtain assurance that accommodation sites likely to house visitors to the CWG in July/August 2022 had assessed Legionella risks and that water systems were under control. Testing would verify the water management system was effective.
- 4.2. During the pandemic, periods of lockdown forced hotels and other accommodation sites to close. During these periods various guidance was issued to highlight the importance of maintaining water systems. The UKHSA (then PHE) ran a national study to investigate the management of water systems at all types of premises during the pandemic period. An initial analysis of this data showed 6% of samples from non-hotel

venues had unsatisfactory levels of *Legionella* compared with 15% of samples from hotel venues, highlighting the potential risks that are particularly linked to hotel sites.

- 4.3. A study specific assessment questionnaire was undertaken and water samples collected from hotels, guest houses and bed and breakfast premises that may have been used to accommodate visitors to the CWG 2022 and premises identified as being Games Sensitive.
- 4.4. Up to 12 samples were taken from each premises. Microbiological testing constituted the count of *Legionella* species in each 1 litre sample. Water samples were taken at accommodation sites from selected outlets such as: Taps, Showers with efforts being made to identify outlets that had separate Hot and Cold supplies as well as mixer taps/showers.
- 4.5. There was then a complicated paper trail and time & temperature control requirement for all the samples to be couriered to London, York or Porton Laboratories for analysis. Samples that failed the time and temperature requirements would be invalidated. All data from the study was collated by the UKHSA's Food, Water and Environmental (FW&E) Microbiology Laboratories. This was then fed back to your officers and other participating Local Authorities, to advise the samples were fine or to take remedial steps.
- 4.6. Results were interpreted through using the HSE Approved Code of Practice L8: The Control of Legionella Bacteria in Water Systems and its associated technical guidance, HSE 2013 as shown in Table 1. The detection of elevated levels of *Legionella* bacteria was communicated urgently for rectification.

Table 1. Interpretive criteria

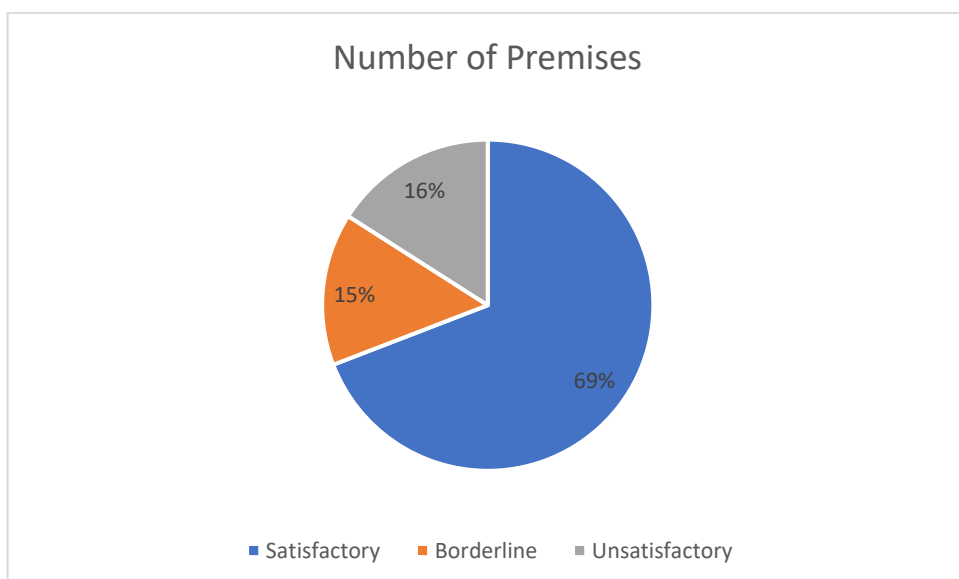
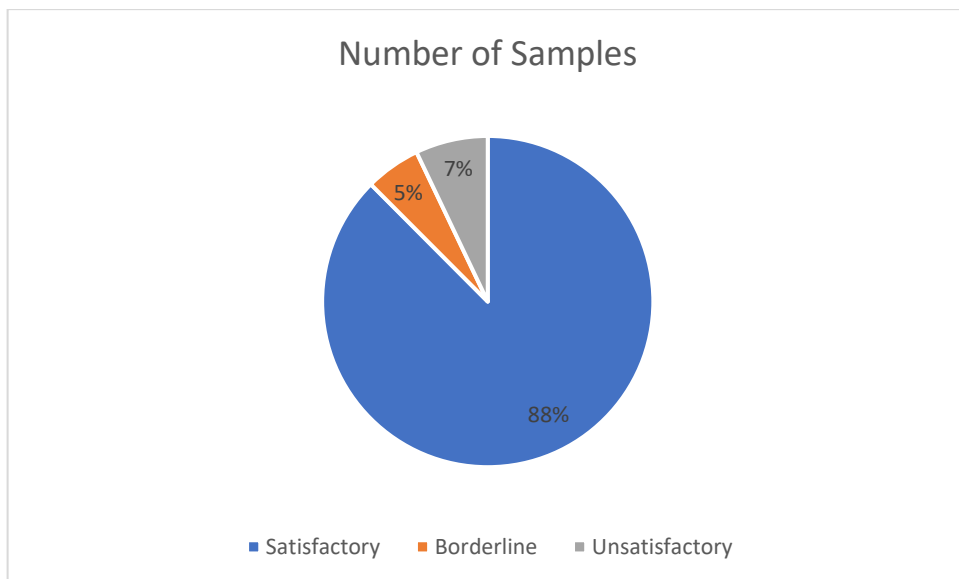
Criterion	Microbiological Result (cfu/l)		
	Satisfactory	Borderline	Unsatisfactory Unacceptable/ potentially hazardous
<i>Legionella species</i>	<100	100-1000	>1000
<i>Recommended Action</i>	-	Consider a system review in accordance with L8	An immediate system review in accordance with L8 is recommended

- 4.7. There are 90 hotels, guest houses and B&Bs registered with Environmental Health. All were included for intervention and legionella sampling. In addition, we also included the four training venues: those being a leisure centre, a stadium, a school and a university sports centre.

5. Results and Analysis

- 5.1. In total 94 premises were subject to intervention with a total of 593 samples being taken. Results are shown below.

Result	Number of Samples	Number of Premises
Satisfactory	519	65
Borderline	32	14
Unsatisfactory	42	15
Total	593	94



5.2. As can be seen in the Pie Charts above:

- 93% of samples were found to be satisfactory or borderline for Legionella sp.
- This comprised 84% of the premises tested.
- 7% of samples were unsatisfactory for Legionella sp.
- This comprised 16% of the premises tested as being unsatisfactory.

5.3. The data is difficult to analyse as different numbers of samples were taken at each premises. However, we have concentrated on the “number of premises” with one or more failed or borderline result. Therefore 65 premises of the 94 tested were advised everything was satisfactory.

5.4. All premises returning a borderline or unsatisfactory results received a written warning advising of their result (29 of 94) and were required to review, amend and update their Risk Assessments and Water Management Plans to reflect these findings.

5.5. Shortly after the warning letters, further samples were taken at the 15 premises that had returned unsatisfactory results. Most were compliant the second time around, and all undertook steps to become compliant. During this retesting phase one premises still had rooms to let, so a Prohibition Notice under the Health and Safety at work Act was served. This prohibited the use of any rooms on that water supply ring until satisfactory results were obtained.

6. Outcome

6.1. This is the largest known sampling programme for legionella undertaken. As a result, there is no comparable data available nationally to compare the results obtained against. It is not known whether this is a lockdown phenomenon or a long-standing issue which has not previously been investigated.

6.2. The intervention and sampling regime has detected premises (31% of hotels in the city) with legionella and enabled remedial actions to be undertaken to make them safe for visitors and staff. This has potentially prevented large scale legionella outbreaks from occurring in the city, and other participating areas.

6.3. During the remedial works, a number of the premises had specialist contractors to assist them in making safe their premises and to monitor and manage their future controls. Some of these contractors undertook tests prior to advising we should resample as the premises were now free from legionella. On a number of occasions the UKHSA laboratories did detect legionella bacteria in shower samples where private laboratories did not. It is well known legionella is a difficult bacterium to test for but this does reflect the need for some in-depth testing from time to time as well as the need for a large sample size if this is to be undertaken.

6.4. Environmental health will continue to respond to incidents of reported legionella linked to a premises. In addition we will look to work with both UKHSA and our own public Health team to secure resources to repeat the activity in the medium future.

7. Consultation

- 7.1. The report is for information and, therefore, no consultation has been undertaken.

8. Implications for Resources

- 8.1. All the project was funded costs including a seconded officer were funded by the UKHSA. In addition, the increased enforcement costs were funded by monies identified for Regulatory Services to undertake additional work to ensure the safety of the games from our regulatory work.

9. Implications for Policy Priorities

- 9.1. This work supports the Council priorities of Birmingham is a great, clean and green city to live in and Birmingham residents gain the maximum benefit from hosting the Commonwealth Games.
- 9.2. Additionally, it supports Regulation and Enforcement Division's mission statement to provide 'locally accountable and responsive fair regulation for all - achieving a safe, healthy, clean, green and fair trading city for residents, business and visitors'.

10. Public Sector Equality Duty

- 10.1. The regulation of health and safety and control of disease under our public health acts, is important as the most vulnerable members of our society can be disproportionately affected by such illnesses.

INTERIM ASSISTANT DIRECTOR OF REGULATION AND ENFORCEMENT

Background Papers:

Approved Code of Practice and guidance: Legionnaires' disease. The control of legionella bacteria in water systems