	<p style="text-align: center;">STRPS – Safety Management System Section 8.7.1 Legionella Risk Management</p>	<p>REF: SMS 8.7.1 ISSUE: 04 DATE: 6.3.26* PAGE: 1 of 5</p>
--	--	--

### 8.7.1 Requirements.

The STRPS is held responsible for the management of legionella risk throughout its premises under the Health and Safety at Work etc Act 1974, the Management of Health and Safety at Work Regulations 1999, and the Control of Substances Hazardous to Health Regulations 2002. This duty is carried out by:

- Identifying and assessing sources of risk in its premises.
- Effectively managing any risks identified.
- Taking steps to prevent or control any risks.
- Keeping and maintaining the correct records.

### 8.7.2 Arrangements.

A competent company is engaged to prepare a detailed risk legionella risk assessment of all the STRPS buildings at both Alston and Slaggyford that considers the following:

- Management responsibilities, including the name of the STRPS competent person and a description of the STRPS water systems.
- Competence and training of key STRPS staff & volunteers.
- Any identified potential risk sources.
- Any means of preventing the risk or controls in place to control risks.
- Monitoring, inspection and maintenance procedures.
- Records of the monitoring results and inspection and checks carried out.
- Arrangements to review the risk assessment regularly, particularly when there is reason to suspect it is no longer valid.

Any monitoring & inspection required by the resulting risk assessment is implemented by a Legionella Management Plan which is controlled by the designated STRPS competent person which includes a formal annual review of the Legionella Management Plan which will be presented to the STRPS Safety Management Group as an agenda item.

### 8.7.3 Legionella Risk Management

Legionnaires disease is a severe and potentially fatal form of pneumonia caused by Legionella bacteria. The initial symptoms are similar to flu: high temperature, fever and chills, coughing, muscle pains, and headache. There may also be diarrhoea and signs of confusion.

#### How is Legionnaires Disease Caught?

Since Legionella bacteria are widespread in the environment and commonly found in natural water courses, they may contaminate and grow in other water systems such as: the cooling towers of air conditioning systems, evaporative condensers, and hot and cold

water services. Other potential sources include: humidifiers, spa and whirlpool baths, showers, and ornamental fountains. Small droplets of contaminated water which become suspended in the air (aerosols) by the action of cooling towers or showers, etc. may enter the intake of air conditioning systems, spread outside into the surrounding area, or even into the inside of a building. Breathing in the contaminated droplets is the normal route of infection. There is no known case of the disease passing from one person to another.

### **Who is at Risk?**

Everyone is potentially susceptible to infection but some people are at higher risk including: those over 45 years of age, smokers, heavy drinkers, those suffering from chronic respiratory or kidney disease, and people whose immune system is impaired. Men are also more at risk than women.

### **Assess the Risk**

A responsible Person or someone else in control of premises must risk assess for legionnaires and take appropriate measures to prevent or minimise the risk of exposure. Whoever conducts the risk assessment will need to be competent, which will include an understanding of water systems and associated equipment, heat exchangers, and showers. The factors that make these systems a risk are:

- conditions that will encourage bacteria to multiply - for example, a water temperature (all or in part of the system) between 20 - 45°C;
- a source of food for the bacteria such as sludge, scale, rust, algae, or fouling;
  - stored or re-circulated water; and/or
- the production or spread of water droplets - for example from showers or dead end pipework/taps not used for a while.

### **Prevention then Control**

If a risk is identified, the Responsible Person first must consider whether it can be avoided so far as is reasonably practicable by looking at the type of water system or method of work used. If the risk cannot be prevented, controls must then be introduced. A written scheme must set out what will be done to control the risk from Legionella. It must describe:

- The entire water system - an up-to-date plan/schematic diagram and an asset register.
  - Who is responsible for carrying out the assessment and managing its implementation.
- The safe and correct operation of the water system (including for start-up or restarts, and shutdown procedures).

The risks from exposure to Legionnaires will normally be controlled by measures which prevent or control the growth and multiplication of Legionella and then by minimising exposure to water droplets. The Responsible Person must:

- Avoid water temperatures and conditions that encourage the growth of Legionella and other micro organisms (especially water temperatures between 20°C - 45°C, and a supply of nutrients such as rust, sludge, scale, algae, and other bacteria).

- Ensure that water cannot stagnate anywhere in the system by keeping pipe lengths as short as possible, removing redundant pipework (dead legs), and regularly (at least weekly) flush through or use water systems including taps and showers.
- Keep the system and the water in it clean and de-scale shower heads and hoses at least quarterly;

### **Responsible Person**

The Responsible Person implements the control scheme and therefore needs to be competent – this means with sufficient knowledge, experience, instruction, and/or training on the system and the risks and sufficient authority to enable them to manage and control the scheme effectively.

### **Record Keeping**

The usual requirements for risk assessments apply. The Responsible Person must record the significant findings of the assessment and the details of any monitoring or checking carried out. Records of the written scheme and who is responsible for managing that scheme must also be kept.

The records should include details of:


- The person or persons responsible for conducting the risk assessment, managing, and implementing the written scheme.
- The significant findings of the risk assessment, including precautionary measures and any groups of employees particularly at risk.
- The written control scheme and details of its implementation and;
  - The results and dates of any inspection, test, or check carried out, including details of whether and how the system was operating, including stating if it was or was not in use.

### **Water Treatment Methods, ETC.**

Water companies treat raw water to make it potable through a multi-stage process: coagulation/flocculation (binding particles), sedimentation (settling solids), filtration (removing particles/bacteria via sand or membranes), and disinfection (killing pathogens using chlorine or ozone). Additional steps like pH adjustment and fluoridation are used for safety and water quality, before being pumped for general use/consumption.

It is important to maintain the cleanliness of the water system. The mechanisms and frequency for doing this will depend on the system, whether cleaning or disinfecting is being done routinely or as a result of a problem being identified during monitoring, and should be identified within the risk assessment. This should take account of factors such as whether the system is open or closed, the type and level of contamination, and the population that could be exposed.

In hot and cold water systems, Legionella is traditionally controlled by storing hot water above 60°C and distributing it at above 50°C, and keeping cold water below 20°C.

	STRPS – Safety Management System Section 8.7.1 Legionella Risk Management	REF: SMS 8.7.1 ISSUE: 04 DATE: 6.3.26* PAGE: 4 of 5
--	---	--

#### **8.7.4 Applicable Legislation.**

Health and Safety at Work etc Act 1974.

The Management of Health and Safety at Work Regulations 1999.

Control of Substances Hazardous to Health Regulations 2002.

#### **8.7.5 References.**

L8 Legionnaires Disease – The Control of Legionella Bacteria in Water Systems ACOP & Guidance

INDG 458 04-2012 Legionnaires Disease – A Brief Guide for Duty Holders.

HSG 274 04-2014 Part 2 Legionnaires' disease Part 2: The control of legionella bacteria in hot and cold water systems

#### **8.7.6 Documentation.**

- Legionella Risk Assessments for:
  - Alston Engineering Workshops.
  - Alston Station Buildings.
  - Slaggyford Station.
  - Slaggyford Buffet Car.
- Legionella Risk Management Plan.
- Water Analysis Testing Records.
- Water System Maintenance Records.
- Water System Temperature Check Records.



STRPS – Safety Management System  
Section 8.7.1  
Legionella Risk Management

REF: SMS 8.7.1  
ISSUE: 04  
DATE: 6.3.26\*  
PAGE: 5 of 5