

PURPOSE OF THE STANDARDS

The standards set out the minimum requirements for the delivery of the services listed below related to the control of legionella bacteria in water systems. The standards together with this guide should be read in conjunction with the LCA Buyer's Guide (*LCA/BYG*). All these standards can be downloaded from the LCA website www.legionellacontrol.org.uk.

It is not the role of the LCA or these standards to prescribe particular techniques or technologies for the control of legionella bacteria in a risk system, however, whatever method is employed, the overall programme should be capable of delivering the desired outcomes. These outcomes may be dependent on the nature of the water, the system being treated, the service user's expectations and performance specification, if any.

LCA STANDARDS

- Legionella Risk Assessment Services
- Water Treatment Services
- Hot and Cold Water Monitoring and Inspection Services
- Cleaning and Disinfection Services
- Independent Consultancy Services
- Training Services
- Legionella Analytical Services
- Plant and Equipment Services
- Facilities Management Services

Each standard contains the following sections:

A) SCOPE OF SERVICE DELIVERY

This section contains a definition of the service provided and sets out the extent and limits of each service in such a way as to be flexible enough to accommodate legitimate variation and exacting enough to ensure the service is sound.

B) KNOWLEDGE AND SKILL OF SERVICE PROVIDER STAFF (INCLUDING SUB-CONTRACTORS)

The service providers should confirm and be able to prove to others that all members of their staff are competent to carry out the required tasks.

In cases where the service delivery may involve a number of skill areas, e.g., surveyor, technician, chemist, etc., these are identified in each standard. The level of knowledge and skill required to carry out different aspects of the services may vary and the service provider should identify the knowledge and skills required for the relevant task, provide appropriate training and assess the competence of the operatives to carry out assigned tasks.

Guidance regarding the knowledge and skills required to carry out specific tasks is outlined in the LCA Knowledge and Skills Matrix (*LCA/MAT*).

In addition, the service provider staff attending site should have general health and safety awareness and capability appropriate to the tasks being undertaken. They should have the ability to carry out their work in a safe, efficient and effective manner and have knowledge of: carrying out pre-work safety checks/work-task risk assessments; PPE, its role and uses; portable appliance inspection; confined space entry; lone working ability and awareness; safe use of ladders and steps; procedures for permit to work; and health and safety requirements for asbestos, and other health and safety matters, where relevant.

The service provider company, as required by the LCA, should maintain training records and separate competence assessment records for individuals for each task they perform in delivering the services. These should be made available to the service user on request.

Information on understanding competence, and how to develop and assess it, is described in the LCA Competence Guide (*LCA/COM*).

C) SERVICE DELIVERY

To enable the service provider company to deliver the specific legionella control service in an appropriate and safe manner, the LCA expects the company to have in place procedures to cover and manage the following (where applicable):

- Defining the scope of service
- System survey (information acquisition)
- Programme design
- Programme initiation, execution and management

D) SERVICE USER: DUTIES AND RESPONSIBILITIES

This section details the service user commitments and responsibilities regarding the delivery of the specific services by the service provider. There are certain issues that the service user should address that apply to all services offered. The service user should:

- provide a copy of any existing legionella risk assessment, details of control targets, e.g., temperatures, biocide levels, the written scheme including escalation procedures, written control schemes/procedures, etc.
- provide notification and any necessary instruction on known risks and safety requirements in the areas the service provider will be working, e.g., access to the asbestos register, site induction, etc.
- provide safe access and egress
- provide contacts for communication and escalation

LCA STANDARD FOR THE DELIVERY OF LEGIONELLA RISK ASSESSMENT SERVICES

A) SCOPE OF SERVICE DELIVERY

This service standard is for those providing risk identification, assessment and review services related to the risk of exposure to legionella bacteria from work activities associated with all water systems together with risk control and/or reduction and required control measures.

The legionella risk assessment carried out by the service provider will cover those systems that the service provider is contracted to assess. It should state clearly the limitations of the assessment, i.e., the systems that are knowingly not included. Where systems have knowingly been excluded from the risk assessment, there should be a statement that a complete legionella risk assessment should include the assessment of all systems where water is stored or used in premises controlled in connection with trade, business or other undertaking. (See L8 para 25.)

B) KNOWLEDGE AND SKILL OF SERVICE PROVIDER STAFF (INCLUDING SUB-CONTRACTORS)

The competence of the assessor is of paramount importance and should be matched to the system being assessed.

Assessors should be able to demonstrate that they have specialist knowledge of legionella bacteria and of the water system(s) to be assessed and that they are competent to carry out any necessary surveys and sampling.

In addition, assessors should have undertaken the necessary practical training and gained experience with a competent assessor to be able to assess the systems described below.

1. Hot and cold water systems: These include but are not limited to: water supply arrangements, hot and cold water services, etc. When carrying out assessments of complex systems and/or in premises with elevated susceptibility the assessor should have an appropriate level of competence.

2. Evaporative cooling systems: These include but are not limited to systems containing: cooling towers, evaporative condensers, dry/wet cooling systems, plume abatement cooling towers, humidifiers, softeners, etc. Assessors should have additional knowledge, experience and/or training in designing and managing an appropriate water treatment programme as well as in the assessment of water treatment/control programmes, water testing and monitoring, water chemistry and treatment theory, pack inspection techniques and condition appraisal, cleaning techniques available, and, where they are applicable, the impact of these techniques on plant, equipment and the environment and special precautions that may be required.

3. Other systems: These include but are not limited to: swimming pools, spa and hydrotherapy pools, vehicle wash systems, misting systems, leisure and ornamental water features, engineering and machining systems, paint prep systems, fume scrubbers, fire and deluge systems, hose pipe and sprinkler systems, water bowsers, pressure washers, dentistry equipment, emergency showers, rain water harvesters/grey water, etc. Risk assessments of these systems may require the assessor to use a first principles approach. Assessors should therefore have a level of competence appropriate to the type of system being assessed including: water chemistry, treatment and testing, applicable inspection and condition appraisal techniques, cleaning methodologies, etc. Since there is such a wide variety of other systems, it can be highly beneficial to the assessor to have the availability of someone (usually an employee of the service user) with intimate working knowledge of the system being assessed.

Please refer to Section C below and the Guide to the LCA Standards for Service Delivery at the beginning of this document.

C) SERVICE DELIVERY

To enable the Service Provider to deliver legionella risk assessment services in an appropriate and safe manner the LCA expects the company to have in place procedures to cover and manage the following:

1. Definition of scope:

Detailed clarification of the scope of the services to be supplied is required and should include:

- the premises and/or buildings to be encompassed by the assessment
- the identification of the systems to be assessed and any that are knowingly excluded
- the requirements regarding schematic diagrams and asset registers and their format/standard

(See BSRIA Guide 'Legionnaires' Disease - Risk Assessment' (BG 57/2015) Section 2.4, WMSoc 'Guide to Risk Assessment for Water Services' Section 2.5, BS8580:2010 'Water quality - Risk assessments for Legionella control - Code of practice' Annex H and HSE 'Legionnaires' disease: The control of legionella bacteria in water systems' (L8) Para. 40.)

(NB: If schematic diagrams and asset registers already exist they may be accurately referenced and verified during the assessment. If they do not exist for identified risk systems, details of how they will be produced should be agreed with the service user. L8 paras 38-40 indicate that schematic diagrams and asset registers are produced to help the person who carries out the risk assessment. If they are absent or not up to date this will be detailed in the corrective actions as a requirement.)

- specific site safety and/or other requirements, e.g., induction training, etc.
- the necessary access to the site to be surveyed and the presence of a competent escort who is familiar with the site and the system(s) to be assessed and who will be responsible for the assessor's health and safety.
- the components of, or input into, the written scheme to be produced or supplied by the assessor in addition to the risk evaluation, control measures and corrective actions
- presentation of the final assessment, e.g., electronic format, hard copy, number of copies, etc.
- the name of the person who will receive the risk assessment
- a defined agreement between both parties defining the scope of the risk assessment, referencing the agreed level of detail in, and format of, for example, schematic diagrams, asset registers, photographs, etc., where applicable

2. Initiation

The service provider should provide details of the preparatory work required including:

- pre-work risk assessment
- equipment check lists
- verification by the service provider of the assessor's competence to carry out the specific system assessments and associated tasks

3. The assessment

The service provider should ensure that (subject to scope):

- all required systems are identified and inspected
- the systems identified as presenting a risk all proceed to full assessment during which previous risk assessments are reviewed
- schematic diagrams and asset registers of these systems are available or are produced (see NB below)
- the condition of system water and accessible equipment is determined, and the contribution to risk made by the design, construction and operation of the system and equipment is evaluated (condition surveys)

The service provider should also ensure that the written scheme is reviewed including:

- the effectiveness of the control scheme
- the maintenance history of the systems
- history of past problems
- monitoring and inspection records for the systems and significant deviations from acceptable operating conditions
- the ability of management to maintain control of the risk of legionella
- the competence of site staff and contractors to control the risk of legionella

(NB: For further information refer to L8 & HSG274 and BS8580.)

In the absence of an up-to-date schematic diagram the risk assessor may judge that there is sufficient information to complete and issue a risk assessment, and full reasons for this decision should be given in the assessment. The risk assessor may produce diagrams during the site survey in order to assist in understanding the system and explaining the findings of the assessment. These may not meet the requirements of L8 para 40 and the written scheme where full system schematic diagrams are needed.

4. Reporting

The service provider should ensure that the content and output of the assessment, subject to the agreed scope, will contain the following:

- executive summary, if required (optional)
- scope of assessment, including clear identification of buildings' systems and their use
- identification of key personnel, both staff and contractors, and their competence (Ref. BS8580)
- identification of the risk systems
- schematic diagrams or reference to them (see NB in Section 3 above)

- results of condition surveys including operating parameters, temperatures, system inspections and asset registers
- review of written scheme
- analysis and evaluation of risk for each system including an explanation of how the risk rating is derived
- recommended and prioritised corrective actions to eliminate or reduce the risk
- the site and system specific control measures (monitoring, inspection and treatment, etc.) including identification of sentinel outlets and/or other sample and inspection points
 - short term control measures to be applied until completion of corrective actions
 - long term control measures to be applied following completion of corrective actions
- precautions to be taken when testing, maintaining or operating low risk systems, such as fire systems, heating and chilled water systems, etc.
- next review date
- a recommendation to establish under what circumstances a review of the assessment will be required
- limitations of the assessment
- guidance re emergency procedures
- matters or areas of evident concern beyond the scope of the assessment
- sources of reference and guidance utilised, e.g., bibliography
- clear identification of the assessor, their experience and qualification
- evidence that the assessment has been reviewed prior to issue and signed by the reviewer prior to issue

The risk assessment does not involve the preparation of the written scheme of control, but it does provide information that is critical to its preparation in the form of recommended corrective actions and control measures.

5. Risk Assessment Reviews

L8 paras 32 & 47 indicate that risk assessments should be reviewed regularly and when the assessment is no longer valid. It is the dutyholder's responsibility to identify the requirement to carry out a review of the risk assessment as detailed in D.v) below. The service provider should have procedures in place to determine, if requested/contracted, whether the existing assessment is still valid, suitable and sufficient and to decide if a review of the existing risk assessment in accordance with BS8580 section 9 is required.

D) SERVICE USER: DUTIES AND RESPONSIBILITIES

There are several key responsibilities that the dutyholder must address. These are listed below.

- There must be a legionella risk assessment that includes all systems where water is stored or used in any premises controlled by the dutyholder (COSHH Regs). This risk assessment must be reviewed when required. (See L8 paras 32 & 47.)
- When issuing any invitation to potential service providers to quote/tender for legionella risk assessment services it is extremely important that the scope of the work is clearly defined by the dutyholder or their representative. The requirement or request to "carry out a legionella risk assessment in compliance with L8" does not detail sufficiently the services required, as there are a number of areas open to interpretation and judgment.
- Schematic diagrams and asset registers must be available in order to inform and help the risk assessor. (See L8 paras 38 & 40.)
- The findings of the risk assessment including the required corrective actions and the control measures must be implemented.
- A written control scheme must be produced and maintained.
- Regular reviews of the progress of legionella control activities must be carried out.
- Procedures must be in place to determine if the existing risk assessment remains valid, suitable and sufficient. If it is not, then a risk assessment review is required.

(NB: It is likely that the risk assessor or other service providers can play a valuable role in these processes.)

FOR AND ON BEHALF OF THE LEGIONELLA CONTROL ASSOCIATION