



HSG19

Legionella Guidance

Organisation	Somerset Council
Title	Legionella Guidance
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Purpose of this Guidance

Approved Code of Practice L8 (ACoP) (4th edition) helps duty holders, including employers, those in control of premises and those with health and safety responsibilities to comply with their legal duties in relation to legionella. Somerset Council (SC) is committed to compliance with the ACoP for Legionnaires' disease and ensuring a safe place of work for its employees. This document aims to provide guidance on how best to protect employees and minimise the risks of Legionnaires' disease.

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1 Quick facts:

- [Legionnaires' disease](#) is caused by bacteria that exist naturally in water and can be inhaled in the form of water droplets from outlets such as taps, showers and cooling towers.
- SC has a [legal duty](#) to assess the risks of Legionnaires' disease and to prevent or control the risk.
- SC has a robust legionella risk management [programme](#) in place.
- Premises Managers need to ensure that their [responsibilities](#), specified in the risk assessment, are implemented.
- Premises Managers need to complete the legionella training to understand how to perform the [checks](#) specified in the legionella risk assessment.
- All legionella risks need to be managed without creating a risk of [scalding](#).
- Alternative [heating sources](#) need to be managed in line with the legionella risk assessment and manufacturer's recommendations for the installed system.
- Prompt, appropriate action must be taken in the event of a Legionnaires' disease [outbreak](#)
- Legionella can pose a particular risk in [spa baths](#).

2 What is legionella and Legionnaires' disease?

Legionella bacteria are common in natural (rivers and lakes etc.) and artificial water systems, e.g., hot and cold-water systems (storage tanks, pipework, taps and showers).

We usually associate the presence of legionella bacteria with larger water systems, e.g., in factories, hotels, hospitals, museums, and cooling towers, but they can also live in smaller water supply systems used in homes and other residential accommodation. Other potential sources of legionella include spa and whirlpool baths, humidifiers (in factories) and fire-fighting systems (sprinklers and hose reels).

Legionella bacteria can survive in low temperatures but thrive at temperatures between 20°C and 45°C. High temperatures of 60°C and above will kill them.

Legionnaires' disease is a potentially fatal form of pneumonia that can occur when water droplets, containing legionella bacteria, are inhaled. It can affect anybody, but some people are at higher risk; including those over 45, smokers and heavy drinkers, those suffering from chronic respiratory or kidney disease, and people whose immune system is impaired.

What are the symptoms?

The early symptoms of Legionnaires' disease include a 'flu-like' illness with muscle aches, tiredness, headaches, dry cough, and fever. Sometimes diarrhoea occurs and confusion may develop. Deaths occur in 10-15% of the general population and may be higher in some groups of patients.

The incubation period normally ranges from 2 to 10 days. In rare cases some people may develop symptoms as late as three weeks after exposure.

How can it be prevented?

To ensure that water systems do not harbour dangerous levels of legionella bacteria:

- Water systems and outlets must be maintained in good, physical condition and be kept clean.
- Water temperatures, between 20°C and 45°C, should be avoided. Where possible, water should be stored at the right temperature, i.e., < 20°C or > 60°C.
- Stagnation, and the presence of foreign matter and biological nutrients in the water, must be avoided.
- Water temperatures at the outlets must be regularly tested in accordance with this guidance, anomalies considered and rectified.
- Regular usage is important where stored water exists, so review turnover from time to time and limit storage where possible.

What can make a legionella outbreak more likely?

This section explains some of the factors that legionella risk assessment contractors look for when assessing the legionella risk in water systems:

<i>Risk factor</i>	Is this a problem?
1) Are there areas of poor water flow in the water system? <i>Why? Little or no flow results in stagnation, enabling bacteria to multiply undisturbed.</i>	Are there infrequently used outlets, e.g., showers, outside taps etc.?
	Are storage cisterns unnecessarily large?
	Are there areas where stagnant water occurs (dead legs), e.g., pipes to a washing machine that is no longer used?
	Is any pipework unnecessarily long or indirect?
	Does anything prevent the system being completely drained or pumped out?
	Does anything prevent easy access to water tanks or evaporative condensers for visual inspection and maintenance?
	Is the water temperature between 20°C and 45°C? (the range which allows bacteria to thrive)

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<p>2) Do water storage conditions allow the bacteria to multiply?</p> <p><i>Why? The wrong temperature and the presence of nutrients in the water can mean that bacteria thrive.</i></p>	<p>Are any cold-water tanks situated in warm parts of buildings?</p> <p>Are there any tanks where water is not uniformly heated?</p> <p>Are there TMVs that could set a favorable outlet temperature for legionella growth?</p> <p>Is there debris in the system, such as rust, sludge, or scale (often a problem in old metal cisterns) that could provide food for growing legionella?</p> <p>Have algae, organic matter, insects, or vermin been allowed to enter and remain in tanks?</p> <p>Could poor housekeeping or maintenance allow foreign matter into tanks?</p> <p>Have plumbing materials been used which do not comply with water authority by-laws?</p> <p>Have materials been allowed to deteriorate?</p> <p>Is a bio film coating hard surfaces or lying on the water surface?</p>
<p>3) Do you have any water outlets that might release a spray?</p>	<p>These may include:</p> <ul style="list-style-type: none"> ▪ shower heads. ▪ spas or whirlpool baths. ▪ pools, including hydrotherapy pools. ▪ humidifiers; water fountains. ▪ evaporative condensers; and ▪ taps (although this is rare).
<p>4) Who are the people at risk?</p>	<p>Are any of your employees, residents, visitors etc. vulnerable to infection, for example:</p> <ul style="list-style-type: none"> ▪ Are they over 45? ▪ Are they smokers? ▪ Are they heavy drinkers?

- | | |
|--|---|
| | <ul style="list-style-type: none"> ▪ Do they suffer from respiratory disorders? ▪ Do they already have an impaired immune system? |
|--|---|

3 Legal requirements

The standards for compliance are contained in the Health and Safety Executive's (HSE) Approved Code of Practice (ACoP) document L8: Legionnaires' disease – The Control of Legionella Bacteria in Water Systems.

In summary:

- An assessment of the legionella risks needs to be undertaken for all premises, and should be reviewed via the Civica website, at least annually, or sooner should a significant change occur to the building or activities carried out.
- A written scheme of action needs to be implemented, to reduce these risks to an acceptable limit.
- People undertaking actions, in support of the above, need to be competent.
- A 'Responsible Person' must be appointed for each premises where there is a reasonably foreseeable legionella risk.
- Records need to be kept (for at least 5 years) of all legionella checks, treatment, and training.
- Competent advice must be available.

The HSE, when inspecting legionella risk systems, will compare what they find on site with the standards laid down in ACoP L8. Where standards fall below the requirements set out in the ACoP, inspectors may use enforcement action to ensure compliance.

4 What are SC's arrangements?

How does SC comply with its legal requirements? SC has designed its compliance system around the requirements specified in the L8 ACoP.

This is how it is dealing with each of the 7 main requirements:

1. An assessment of the legionella risks needs to be undertaken for all premises and regularly reviewed

- **SC Non-school premises** - SC has enabled approved contractors to undertake legionella risk assessments, on all non-school premises, it is responsible for
- **SC Schools who have a contractual arrangement in place with the Education Partnership and Skills team** – They offer a choice of contractors to undertake legionella risk assessments, on behalf of all schools, who buy their services and they manages these contractors on behalf of these schools

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- **Local authority-maintained schools (who do NOT have a contractual arrangement in place with the Education Partnership and Skills team)** – The school is solely responsible for appointing their own competent contractor to undertake a legionella risk assessment on their behalf
- A legionella risk assessment will identify the hazards and explain what needs to be done to reduce the risk of a legionella outbreak
- These written assessments, will be supplied to the respective premises, once complete so that they have a copy for their records
- Premises Managers are required to review their legionella risk assessments, at least annually, via the Civica website or sooner should a significant change occur to the building or activities carried out

2. A written scheme of action needs to be implemented, to reduce these risks to an acceptable limit

- The legionella risk assessments constitute written schemes of actions. They specify who needs to do what and when.
- **SC Non-school premises** – An approved contractor will undertake remedial work and the annual monitoring/ maintenance tasks that require technical knowledge of, and access to, the water storage and temperature control elements of the water systems.
- **SC Schools who have a contractual arrangement in place with the Education Partnership and Skills team** – They offer a choice of contractors who will undertake remedial work and the annual monitoring/ maintenance tasks that require technical knowledge of, and access to, the water storage and temperature control elements of the water systems. The team manages these contractors on behalf of these schools.
- **Local authority-maintained schools (who do NOT have a contractual arrangement in place with the Education Partnership and Skills team)** – The school is solely responsible for appointing their own competent contractor to undertake remedial work and the annual monitoring/ maintenance tasks that require technical knowledge of, and access to, the water storage and temperature control elements of the water systems.
- **All schools** – in addition to the above 2 bullet points, all schools also have the option of buying back the services from the Education Partnership and Skills team to assist with legionella monitoring tasks such as temperature checks.
- The Premises Manager will be responsible for ensuring that any local management issues/ [checks](#) are actioned as appropriate.

3. People undertaking actions, in support of above, need to be competent

- [Training](#) is provided by SC either in the form of a [legionella training presentation](#) (Schools) or a module available on [The Learning Centre \(TLC\)](#) (Non-schools).

4. A 'Responsible Person' must be appointed for each premises where there is a reasonably foreseeable legionella risk

- This person should be a manager, or have similar status and sufficient authority, competence, and knowledge of the installation to ensure that the relevant procedures are carried out in a timely and effective manner.

For the purposes of this guidance, the Corporate Responsible Person will be as follows:

- SC Strategic Asset Management Client - for all non-school premises.
- SC Education Partnership and Skills team – for all schools who have a contractual arrangement in place with Education Property.
- Local authority-maintained schools (who do not have a contractual arrangement in place with Education Property – the responsible person is the school.

5. Records need to be kept (for at least 6 years) of all legionella checks, treatment and training

- Managers should hold records of individuals who have successfully completed the legionella presentation along with the quiz.
- Managers should hold records of individuals who have attended any other form of legionella training e.g., completed module on TLC (non-schools) or Blackboard (schools)
- Records should be kept on site for any legionella checks that are being carried out by the Premises Manager (or 3rd party on their behalf).
- Records must be accessible on site for any legionella remedial/ maintenance work that has been carried out to the water systems by any appointed contractor.
- Premises Managers should ensure that all records are stored safely, and that staff know where they are located should they be required by anybody in the execution of their duties e.g., HSE, CHSU, Area Engineers, Building Surveyors, Strategic Asset Management, Support Services for Education etc.
- Records of the legionella risk assessment annual review should be held on the Civica website.

6. Competent advice must be available

- Dave Dangerfield (SC Building Services Advisor – Strategic Asset Management) 01823 356857/ 07768 801683 or email: dave.dangerfield@somerset.gov.uk
- The Education Partnership and Skills team will provide support and advice to schools and other educational establishments who buy their services only. The admin team contact details are: 01823 355358 or email: property@somerset.gov.uk
- The CHSU can also advise and can be contacted on 01823 355089 or email: chsu@somerset.gov.uk. The CHSU will provide advice and support to all non-schools and

to local authority-maintained schools (who do not have a contractual arrangement in place with the Education Partnership and Skills team).

7. Addressing remedial work identified under LRA inspections

Following the production of a LRA by the appointed competent contractor, identified risks shall be addressed in the following timescales:

- Remedial work identified as **high risk** to be actioned with 20 working days of report being issued to Somerset Council.
- Remedial work identified as **medium risk** to be actioned with 40 working days of report being issued to Somerset Council.
- **Low risk** works are for awareness/ periodic review only.

Exceptional circumstances:

High / medium risk works which involve a large degree of planning and management e.g., replacement of water tanks in roof spaces, are to be flagged as 'work in progress' and to be actively managed in a suitable timescale (with an agreed target date) but to acknowledge the 20-working day target may not be met.

5 What checks are normally required by the Premises Manager?

Below is a typical list of checks that the Premises Manager needs to ensure are undertaken (these may be done by a local member of staff or may be contracted out to a third party).

However, always remember to check your legionella risk assessment for details of the checks required for your premises.

Where the temperatures fall outside the standards, this must be reviewed locally and if improvements cannot be achieved then they need to be reported to the responsible person <link to no. 6 competent people list> immediately.

References for table below:

1. Little used outlets should be flushed on a weekly basis where the level of use is known to be unpredictable, intermittent or after a week without use e.g., after a school holiday.
2. Sentinel taps should be checked monthly (schools – half termly). For hot water systems, sentinel taps are the first and last taps on a re-circulating system. For cold water systems (or non-re-circulating hot water systems), sentinel taps are the nearest and furthest taps from the storage tank. The choice of sentinel taps may also include other taps, which are considered to represent a particular risk.
3. Lower temperatures may be permitted only when certain systems are used and with suitable mitigations in place. Section 9 refers to the exceptions.

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4. The most convenient place to measure the temperature of the incoming cold-water inlet (annually) is usually at the ball valve outlet to the cold-water storage tank.

Frequency	Item	Action	Standard to Meet	
			Cold Water	Hot Water
Weekly	Little used outlets ¹	Flush through and purge		
Monthly/ Half-Termly (schools)	Sentinel taps ²	Water temperature check	Below 20°C after running water for 2 minutes	At least 50°C within 1 minute of running water
	If fitted, input to Thermostatic Mixing Valves (TMVs) on a sentinel basis	Water temperature check		Water supply to the TMV should be at least 50°C within 1 minute of running water
	Water leaving and returning to calorifier			Outgoing water should be at least 60°C ³ , return at least 50°C
Quarterly / half-termly	Shower heads and hoses	Dismantle, descale and clean		
Annually	Incoming cold-water inlet ⁴	Water temperature check	The water should be below 20°C at all times	
Annually	All non-Sentinel taps	Water temperature check	Water temp should be below 20°C after running water for up to 2 minutes.	Water temp should be at least 50°C within a minute of running the water

6 How to perform checks & implement the control measures

Action		How
Purge little-used outlets <i>to ensure fresh water supplies and to limit the risk of bacteria growth in the pipework system</i>		<p>Hot water: Turn on hot water taps and run to waste the initial cold water, until cold water heats up and hot water starts flowing i.e., “run to hot”.</p> <p>Cold water: Turn on cold water taps and run to waste the initial tepid water, until cold water is flowing.</p> <p>Showers: All types must be thoroughly flushed through at full temperature for 2 minutes. (This should be done by either removing the shower head, where possible, or by wearing a face mask, so as not to breathe in the aerosol created by a shower head).</p>
Measure temperature	Outlets fitted with a TMV (Thermostatic Mixing Valve)	<ol style="list-style-type: none"> 1) Connect a <i>temperature surface probe</i> or a <i>surface contact type thermometer</i> to the pipework immediately before the TMV Demo Video for Thermostatic Mixing Valve 2) Keep the water running until the temperature displayed has stabilised on the thermometer 3) Read the temperature <p>Where inaccessible TMVs / pipework are identified then please contact Strategic Asset Management (non-schools) and Education Property (for schools who have a contractual arrangement in place with the Education Partnership and Skills team) and they will review options around gaining access to pipework and TMVs in order to correctly record temperatures. For Local Authority Maintained schools (who do NOT have a contractual arrangement in place with the Education Partnership and Skills team) it is solely your responsibility to ensure that you put local arrangements in place to allow access to TMVs at all times.</p>
	Outlets not fitted with a TMV	<ol style="list-style-type: none"> 1) Run the water 2) Hold a probe thermometer pointing downwards into the flow of water and record the temperature 3) Keep the thermometer in the water until the measurement has stabilised (30 – 60 seconds), then read the temperature Hot water pipe how to test hot water flow temperatures demo video

Temperature checks:**Sentinel outlets – How to check hot water temperatures**

The hot water temperature should be at least 50°C within a minute of running the hot water and should be measured and formally recorded monthly (schools – half termly).

Water leaving and returning to a calorifier (water heater), the outgoing water should be at least 60°C*, and the return at least 50°C, and should be measured and formally recorded monthly (schools – half termly).

Checking and regularly monitoring the water temperature at a hot water sentinel outlet to ensure your system achieves a temperature of at least 50°C is an important legionella risk management task. Find out how to do it with this short video.

<https://legionellacontrol.com/articles/139-sentinel-outlets-how-to-check-hot-water-temperatures>

Sentinel outlets – How to check cold water temperatures

The same method as above should also be applied when checking cold water temperatures.

The cold-water temperature of your system should be below 20°C after running the cold water for up to two minutes and should be measured and formally recorded monthly (schools- half termly).

Probes & calibration:

The type of probe to be used is generally called a stem thermometer; however, where thermostatic mixing valves (TMVs) are fitted (and where access to the pipework can be achieved) then a surface temperature/ contact thermometer can be used.

It is recognised that you may not be able to gain access to your pipework as it may be boxed in, therefore most premises tend to choose the stem thermometer by default. However, where [inaccessible TMVs / pipework](#) are identified then please put arrangements in place to gain access.

Legionella stem thermometers can be purchased from various suppliers on the internet. A simple search will produce several suppliers. There is no recommended or approved supplier; however, the CHSU, Strategic Asset Management and the Education Property will provide support and advice, when purchasing a thermometer, upon request.

Examples of stem thermometers can be found at:

<https://legionellacontrol.com/legionella-products/legionella-thermometers>

* Lower temperatures may be permitted only when certain systems are used and with suitable mitigations in place. Section 9 refers to exceptions.

7 What information and training is available?

1. Risk assessment documentation

All non-schools, which SC has control over, and schools that have a contractual arrangement in place with Education Property have the following documentation:

- A legionella risk assessment which explains the specific advice about what needs to be done in the premises.
- Most premises will also have a logbook for recording details of regular checks (e.g., temperature monitoring). If a logbook is not in place, then there should be some other form of storing records e.g., on your own site-specific spread sheet, in a site folder, on shared computer drive etc.

For local authority-maintained schools, who do not have a contractual arrangement in place with Education Property, it is solely your responsibility to ensure that all the above is in place.

2. Training

SC has provided a self-learning training presentation on Blackboard and a module on TLC, which can be accessed via a computer. It gives the user an understanding of:

- The risks from legionella bacteria,
- The importance of the control measures being applied; and
- How the measures (such as temperature monitoring) can be implemented.

Individuals should notify their manager that they have undertaken the self-learning on Blackboard, such that records of the training can be kept. TLC registers that the course has been completed and issues a certificate after completing an assessment.

3. Premises Management training course

SC provides a legionella risk management module on the Premises Management Training course, which is run by the CHSU.

To book onto a Corporate Premises Management Training course, please contact the CHSU admin team on: 01823 355089 or email chsu@somerset.gov.uk

To book onto a Schools Premises Management Training course, please contact:

SCIL on: 0300 1231967 or email SCIL: scil@somerset.gov.uk

If you still feel, after reading this Guidance, the HS19 Legionella Policy and having studied your legionella risk assessment, that you require further advice or clarification with regards to how you can fulfil your duties, you should contact:

- Dave Dangerfield (SC Building Services Advisor – Strategic Asset Management) Contact details are: 01823 356857/ 07768 801683 or email: dave.dangerfield@somerset.gov.uk

- The Education Partnership and Skills team will provide support and advice to schools and other educational establishments who buy their services only. Contact details are: 01823 355358 or email: property@somerset.gov.uk
- The CHSU can also advise and can be contacted on: 01823 355089 or email: chsu@somerset.gov.uk. The CHSU will provide advice and support to all non-schools and to local authority-maintained schools (who do not have a contractual arrangement in place with the Education Partnership and Skills team).

8 How to manage the risk of scalding

Hot water normally needs to circulate at a minimum of 50°C. However, contact with water at this temperature can sometimes cause scalding, either when water comes out of taps or when somebody leans or falls against a radiator.

So, where a risk assessment has identified that scalding is a reasonably foreseeable risk, the HSE advises the fitting of TMVs (Thermostatic Mixing Valves) to the water supply for baths, showers and hand basins.

A TMV is a valve that blends hot water with cold water to ensure constant, safe outlet temperatures, preventing scalding. TMVs normally prevent the water being discharged at more than 45°C.

Please note that 45°C is the failsafe temperature for water coming OUT of an outlet fitted with a TMV, not the temperature coming into it. The temperature coming into the outlet should be 50°C but the water being discharged from the outlet should be considerably lower. Therefore, if the water coming out of the TMV device exceeds 45°C then the TMV device should fail safe.

45°C is too high an output temperature for an outlet connected to a TMV device. The water coming out of a TMV outlet will not reach 45°C because TMVs are designed to keep water below this level as per the temperatures below. The maximum output temperatures for outlets controlled by TMVs as per NHS Health Guidance Notes are:

- 44°C for an unassisted bath fill
- 46°C for an assisted bath fill (**)
- 41°C for shower applications
- 41°C for washbasin applications
- 38°C for bidet applications

** This high fill temperature should only be considered in exceptional circumstances where there are difficulties in achieving an adequate bathing temperature.

The premises manager should also have in place specific policies that prevent the possibility of persons judged to be at risk gaining access to the bath unaccompanied.

For Corporate Premises: these values correlate with the engineer job notes held by the approved contractor.

Hot water coming out of a non TMV controlled outlet must be at least 50°C within 1 minute of running water.

TMV controlled outlets should be shown on the water schematic diagram which accompanies the premises Legionella Risk Assessment (LRA).

Hot water temperatures at TMV controlled outlets must be measured at the input to the TMV.

The temperature coming into the outlet should be 50°C but the water being discharged from the outlet should be considerably lower. Therefore, if the water coming out of the TMV device exceeds 45°C then the TMV device should fail safe.

Additionally, please ensure that you also take the temperature of the nearest adjacent hot water outlet that has an accessible hot water pipe to confirm a flow temp of at least 50°C within 1 minute of running water at that point as well.

Where the risk of scalding may be high

The fitting of TMVs is particularly prevalent where there is potential for a vulnerable person to be harmed, for example young children, elderly people, people with disabilities or those with sensory loss who may not be able to respond quickly to a high temperature.

It is especially a risk in care-related premises for whole body water contact in baths and showers.

The risk from legionella must be considered by controllers of premises when designing control measures in relation to the risk of scalding.

Are there any other control measures, for scalding, apart from TMVs?

Yes. The approach will depend on the assessed needs, and of the vulnerable people involved.

TMVs are normally essential if vulnerable people have access to hot taps, baths, or showers. However, there is a practical need for some taps (such as in kitchens) to allow water to be discharged at a higher temperature than 45°C.

Other options include:

- Putting up warning signs adjacent to each tap. This may be sufficient for staff and visitors
- Putting up warning signs with Total Communication (TC) symbols, especially where there are service users with learning disabilities.
- Tactile/ Braille warning signs should be considered if there are members of staff, service users, or an anticipation of visitors who suffer from a visual impairment.
- In primary schools – the risk of scalding can be managed by completing a risk assessment on EEC entitled 'Scalding risk at sinks and hand basins' which can be found under 'Primary general' section.

Notes about access to and the installation of TMVs

TMVs need to be placed as close to the water outlet as possible, to minimise the length of pipe, containing water at a temperature liable to allow the bacteria to multiply.

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When TMVs are installed, they need to be made fully accessible i.e., they should not be boxed in. It is important that access is provided to enable the TMVs to be serviced as required. Additionally, access to TMVs is also important for the testing of the water on the Calorifier side of them.

Where inaccessible TMVs / pipework is identified then please contact Strategic Asset Management (non-schools) and Education Property (for schools who have a contractual arrangement in place with the Education Partnership and Skills team) and they will review options around gaining access to pipework and TMVs to correctly record temperatures.

For Local Authority Maintained schools (who do NOT have a contractual arrangement in place with the Education Partnership and Skills team), it is solely your responsibility to ensure that you put local arrangements in place to always allow access to TMVs.

It is recognised that TMVs are not suitable for all premises as they require a certain amount of pressure to work effectively. Where TMVs cannot be fitted, but there is a risk of scalding, the other options mentioned above e.g., signage, scalding risk assessment etc., should be considered.

9 Alternative sources for heating water

Technical guidance HSG 274 (Part 2) recognises that there are alternative means by which water can be heated and reference is made to solar heating. Advanced technology means that alternative water heating systems are now available on the market, and these include e.g., ground source heat pumps, air source heat pumps. These systems may not heat the water to the required temperature of 60°C (minimum outlet water temperature in calorifier systems) necessary to prevent legionella bacteria growth and therefore should be managed, monitored and maintained to ensure that legionella is prevented by means of other control methods, for example, running periodic water cycles, additional electric heating element, trace heating. Use of these types of systems should be reflected in the legionella risk assessment. Any temperature monitoring of these systems should be directly linked to the control methods that are in place, which should be periodically checked at a frequency in line with manufacturer's recommendations.

10 What to do in the case of an outbreak

If an outside agency, such as the HSE or Public Health England, contacted you to investigate the possibility of an outbreak of Legionnaires' disease then the following action needs to be taken:

- Inform senior management, providing all relevant information.
- Contact the CHSU immediately on 01823 355089 – they will provide you with the relevant course of action, as required.

11 Spa baths

There have been several outbreaks of Legionnaires' disease where the cause was traced back to a spa bath.

Why are spa baths a particular risk?

- Spa baths are self-contained bodies of warm water circulating around users at approximately 30-40°C (the ideal temperature at which legionella bacteria thrives).
- Spa baths are not usually drained between users, so the water has to be continually filtered and cleaned.
- People can be exposed while using the spa, but also just being close enough to breathe in the aerosol created e.g., during demonstrations.
- The water is normally stored at the optimum temperature for the legionella bacteria to multiply.
- Particles of dirt, dead skin cells etc. from the people using the bath accumulate, providing food for the bacteria to feed from.
- The piping for the air and water circulation provides a large surface area for the bacteria to grow on.
- The agitated water forms aerosols and spray via which the bacteria can be breathed in.

Persons responsible for managing spa baths need to ensure that:

- A risk assessment is undertaken to identify and assess any potential sources of legionella, and to consider who and how people could be exposed.
- A plan is prepared, to prevent or control any risks identified, which is implemented, managed, and monitored.
- Records are kept of this work.
- Someone is appointed to manage this responsibility.
- Staff are trained, to correctly operate the spa bath, giving them appropriate information about the risks and plans to control them.

The spa bath should be monitored at the following frequencies, and formal records must be kept:

Frequency	Task
Every two hours	Residual disinfectant level and pH – after the initial test
Three times a day	Water treatment (if not continual)
Daily	Water Clarity (before use)
	Automatic dosing systems
	Disinfectant levels in reservoirs

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	Filters
	Strainers
	Backwash and sand filters
Weekly	Drain, clean and disinfect whole system
	Clean strainers
Monthly	Bacteriological test
	Clean input air filter
	Clean pipes
	All automatic systems
Every three months	Filters (thoroughly)
Annually	Written procedures are up to date
	Sand filter effectiveness

The HSE has published a brief guide to managing spa pools:

<http://www.hse.gov.uk/legionnaires/spa-pools.htm>

HSE and Public Health England have published guidance on the Management of Spa Pools – Controlling the Risks of Infection:

<https://www.gov.uk/government/publications/legionnaires-disease-controlling-the-risk-of-infection-from-spa-pools>

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12 Frequently Asked Questions

Q. What is a legionella risk assessment?

A legionella risk assessment is a site-specific document that details the findings of an examination of the entire water system within the premises. The primary purpose is to identify if there are any parts of the system that might support or enable the growth of the Legionella bacteria and therefore present a risk by contaminating the system.

Q. What are the arrangements for educational establishments?

All schools have the opportunity to enter into a contractual arrangement and buy back the services from Education Property. There are several packages available which schools can purchase directly from Education Property. For more information on these packages, schools can contact the Education Partnership and Skills team on: 01823 355358 or email: property@somerset.gov.uk

Schools that do NOT have a contractual arrangement in place with the Education Partnership and Skills team, and managers of self-help projects, are expected to have made their own similar arrangements and are required to address any remedial actions themselves.

All Academies are stand alone and are therefore responsible for procuring their own legionella risk assessments, and addressing any remedial actions themselves, as appropriate.

Q. Who is responsible for initiating the need for review of the legionella risk assessment (LRA)?

L8 Approved Code of Practice (ACoP) states:

The record of the assessment is a living document that must be reviewed to ensure it remains up to date. Arrange to review the assessment regularly and specifically whenever there is reason to suspect it is no longer valid. An indication of when to review the assessment, and what to consider, should be recorded. This may result from the following examples:

- (a) Changes to the water system or its use.
- (b) Changes to the use of the building in which the water system is installed.
- (c) The availability of new information about risks or control measures.
- (d) The results of checks indicating that control measures are no longer effective.
- (e) Changes to key personnel.
- (f) A case of Legionnaires' disease/legionellosis associated with the system.

Using the information provided above, the table below indicates who is responsible for initiating a review of the legionella risk assessment:

	Criteria which would instigate a review:	Premises Manager (PM) to instigate the review	Strategic Asset Management to instigate the review
a	<p>Changes to the water system or it's use.</p> <p>(This will vary depending on whether the changes are done locally or corporately)</p>	<p>If the premises themselves carry out any work locally, which may include changes to the water system or it's use, then the PM is responsible for contacting Strategic Asset Management (non-schools) / Education Partnership and Skills team (for schools who have a contractual arrangement in place with Education Property) to request a review of the LRA.</p> <p><i>**For schools that do NOT have a contractual arrangement in place with the Education Partnership and Skills team, then the school will be solely responsible for arranging for a review of the LRA to be carried out themselves**</i></p>	<p>If Strategic Asset Management /Education Property carry out any work corporately on behalf of the premises, which may include changes to the water system or it's use, then Strategic Asset Management / Education Partnership and Skills team (for schools who have a contractual arrangement in place with Education Property) will be responsible instigating a review of the LRA themselves.</p>
b	<p>Changes to the use of the building in which the water system is installed.</p> <p>(This will vary depending on whether the changes are done locally or corporately)</p>	<p>If the premises themselves carry out any work locally, which may include changes to the use of the building in which the water system is installed, then the PM is responsible for contacting Strategic Asset Management (non-schools)/ Education Partnership and Skills team (for schools who have a contractual arrangement in place with Education Property) to request a review of the LRA.</p> <p><i>**For schools that do NOT have a contractual arrangement in place with the Education Partnership and</i></p>	<p>If Strategic Asset Management carry out any work Corporately on behalf of the premises, which may include changes to the use of the building in which the water system is installed, then Strategic Asset Management / Education Partnership and Skills team (for schools who have a contractual arrangement in place with Education Property) will be responsible instigating a review of the LRA themselves.</p>

	Criteria which would instigate a review:	Premises Manager (PM) to instigate the review	Strategic Asset Management to instigate the review
		<i>Skills team, then the school will be solely responsible for arranging for a review of the LRA to be carried out themselves **</i>	
c	The availability of new information about risks or control measures	Not applicable for PMs	<p>If Strategic Asset Management / Education Partnership and Skills team (for schools who have a contractual arrangement in place with Education Property) became aware (via their competent person) or were provided with new information about risks or control measures then they would be responsible for instigating a review of the LRA themselves, as required.</p> <p><i>**For schools that do NOT have a contractual arrangement in place with the Education Partnership and Skills team, then the school will be solely responsible for arranging for a review of the LRA to be carried out themselves**</i></p>
d	<p>The results of checks indicating that control measures are no longer effective.</p> <p>(This will vary depending on whether the checks are done locally or corporately)</p>	<p>If the premises themselves identified that the results of their local checks indicated that the control measures were no longer effective, then the PM would be responsible for contacting Strategic Asset Management (non-schools)/ Education Partnership and Skills team (for schools who have a contractual arrangement in place with Education Property) to request a review of the LRA.</p> <p><i>**For schools that do NOT have a contractual arrangement in place with the</i></p>	<p>If Strategic Asset Management / Education Partnership and Skills team (for schools who have a contractual arrangement in place with Education Property) identified that the results of their checks (which are being done by a 3rd party contractor) were no longer effective, then they would be responsible for instigating the review of the LRA on behalf of the premise.</p>

	Criteria which would instigate a review:	Premises Manager (PM) to instigate the review	Strategic Asset Management to instigate the review
		<i>Education Partnership and Skills team, then the school will be solely responsible for arranging for a review of the LRA to be carried out themselves **</i>	
e	Changes to key personnel. (This will vary depending on whether the changes are done locally or corporately)	If there were local changes to key personnel that could impact on the current LRA then it would be the responsibility of the PM to notify Strategic Asset Management (non-schools)/ Education Partnership and Skills team (for schools who have a contractual arrangement in place with SSE) as soon as possible to request a review of the LRA.	If there were corporate changes to key personnel that could impact on the current LRA then it would be the responsibility Strategic Asset Management / Education Partnership and Skills team (for schools who have a contractual arrangement in place with Education Property to instigate the review of the LRA as required. <i>**For schools that do NOT have a contractual arrangement in place with the Education Partnership and Skills team, then the school will be solely responsible for arranging for a review of the LRA to be carried out**</i>
f	A case of legionnaires' disease/legionellosis associated with the system.	If a PM is aware of a case of legionnaires' disease/ legionellosis associated with the water systems on their site, then it will be the responsibility of the PM to notify Strategic Asset Management (non-schools)/ Education Partnership and Skills team (for schools who have a contractual arrangement in place with Education Property) to request a review of the LRA immediately. <i>**For schools that do NOT have a contractual arrangement in place with the</i>	Not applicable as the premises will usually know this information before Strategic Asset Management /Education Partnership and Skills team (for schools who have a contractual arrangement in place with Education Property) are made aware of it.

	Criteria which would instigate a review:	Premises Manager (PM) to instigate the review	Strategic Asset Management to instigate the review
		<i>Education Partnership and Skills team, then the school will be solely responsible for arranging for a review of the LRA to be carried out; however, SC will still need to be notified of the outbreak**</i>	

In addition to the above criteria, SC Strategic Asset Management (non-schools) and the Education Partnership and Skills team (for schools who have a contractual arrangement in place with Education Property) also has a programme in place to automatically review all premises legionella risk assessments regularly, for which it is responsible. The programme is based on the type of establishment and the people within it.

The programme below has been agreed by the Council's responsible person who is designated at the time of writing on the [F02](#), which summarizes corporate H&S responsibilities / arrangements in Somerset Council.

Schools that do NOT have a contractual arrangement in place with the Education Partnership and Skills team will also be expected to adhere to and follow this programme.

The following High-Risk premises will be reviewed/ updated every 3 years:

- Residential facilities
- Premises with immune compromised residents
- Care Homes
- Middle and Secondary Schools
- Special Schools

The following Medium Risk premises will be reviewed/ updated every 5 years:

- Primary schools
- Other educational facility e.g., Pupil Referral Unit (PRU)
- Youth Centres
- Children's Centres

The following Low Risk premises will be reviewed/ updated every 7 years:

- Libraries
- Office environment

SC Strategic Asset Management (non-schools) and Education Partnership and Skills team (for schools who have a contractual arrangement in place with Education Property) are currently

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working to the above-mentioned programme; however, if there is a significant change as detailed in (a) – (f) above then the legionella risk assessment will be reviewed/ updated sooner, as required.

Premises Managers are also required to review their legionella risk assessment, at least annually, via the Civica website, or sooner should significant change occur to the building or activities carried out. The CHSU, Strategic Asset Management and the Education Partnership and Skills team (for schools who have a contractual arrangement in place with Education Property) will automatically be notified of any negative responses to your annual review which may result in a new legionella risk assessment being carried out.

Additionally, any new premises which SC takes on/ has control over, SC Strategic Asset Management will automatically request a new legionella risk assessment to be carried out.

13 Construction Works and Legionella

Where any construction works are carried out on an SC managed/ occupied site, the person responsible for managing the project must consider the consequences of the work in relation to the sites current Legionella Risk Assessment (LRA). Typically, the following works would require a review / update of the site LRA:

- a) Internal remodelling involving removal, modification of existing water system and/or installation of new water systems.
- b) Any new construction works which involve removal / modification of existing water system and/or installation of new water systems.
- c) Decommissioning / removal of existing water systems.
- d) Replacing existing water system pipework or components with new.
- e) Installation of new water system pipework or components.

Historically, changes to water systems have been identified through a scheduled review potentially leaving a period of time where the LRA is out of date. SC now requires a pro-active approach to water system changes. It is a requirement of SC's Legionella Policy that where any works to water systems are carried out, as part of the works, a review of the existing LRA is undertaken and where required, the LRA is updated to reflect the new water system. It is also a requirement that the project budget funding the actual works also funds the LRA review and update.

Following completion of the site works, the person managing the project must initiate and ensure that an updated LRA is produced.

For SC Corporate Properties (non-schools), the LRA update shall be carried out by SC's appointed legionella risk assessment contractor.

The process for non-schools is initiated by completing the proforma shown in form F19a which is then returned to:

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- Dave Dangerfield (SC Building Services Advisor – Strategic Asset Management) He can be contacted on: 01823 356857/ 07768 801683 or email: dave.dangerfield@somerset.gov.uk

For schools who have a contractual arrangement in place with the Education Partnership and Skills team the LRA update shall be carried out, by your chosen contractor, in line with the package that you purchase.

The process for schools (who have a contractual arrangement in place with the Education Partnership and Skills team) is initiated by completing the proforma shown in form F19a which is then returned to:

- Education Property will provide support and advice to schools and other educational establishments, who buy their services, only. The admin team contact details are: 01823 355358 or email: property@somerset.gov.uk

The following information must be recorded on the proforma:

- a) A brief description of the works relating to the water system
- b) An annotated plan showing the areas of works relating to the water system changes / additions (for larger construction projects, design drawings are acceptable)
- c) Where any existing water related assets have been removed, for example, boilers, thermostatic mixing valves, water heaters, etc, identify the respective asset reference(s)
- d) Cost centre and general ledger codes so that the works can be recharged to the appropriate budget holder.

Upon receipt of the completed proforma, an order will be raised to review and update (where necessary) the LRA.

Schools that organise their own LRA's are responsible for arranging an updated LRA following completion of relevant works.

14 References and links

The following Somerset Council policy documents are directly relevant to this guidance, and are referenced within this document:

- HS19 Legionella Policy
- F19a Legionella Risk Assessment (LRA) Review & Update Request Form
- [HS29 Retention of Documents](#)

The following external links are also available, for further reference and additional guidance:

- [Blackboard schools training](#)
- [The Learning Centre corporate training](#)
- [Training presentation](#)

- [Legionnaires' disease - Technical guidance HSG 274 parts 2 and 3](#)
- [Legionnaires' disease - The control of legionella bacteria in water systems L8 ACoP](#)
- [HSE Legionella and legionnaires' disease](#)
- [Civica Property](#)

Review and Revision

This Guidance will be reviewed as it is deemed appropriate, but no less frequently than every 36 months. Guidance review will be undertaken by rolling programme established by the CHSU and agreed by the Health, Safety, and Wellbeing Steering Group.

Version History

Revision Date	Author	Version	Description of Revision
		V1.0	New guidance

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