

East Devon District Council

Legionella Policy

Reviewed

February 2010.

Policy Approval

The Policy was originally approved by Executive Board in 2005. This Review contains minor amendments only based on two year's experience. The format has also been amended to comply with current Council guidelines.

Reasons for introducing the policy

In 2001 the Code of Practice 'The control of legionella bacteria in water systems' was introduced. Since then, this Council has introduced procedures to reduce the associated risks and minimise the possibility of infection.

Policy Statement

East Devon District Council acknowledges and accepts its responsibilities under the Health and Safety at Work Act 1974 and the HSC Approved Code of Practice 'The control of legionella bacteria in water systems' 2001. The Council will comply with all guidance issued by the Health and Safety Executive in this respect. The Council will take all reasonable precautions to prevent risk to health from exposure to legionellosis by implementing a monitoring procedure at all its relevant buildings.

How will we go about it?

We will carry out risk assessments every three years and implement monitoring of systems to meet the criteria listed in Appendix 2.

Outcomes

All non-housing properties (listed in Appendix A) are in compliance with ACOP L8 and Health & Safety Policy.

Policy

1. Introduction

Legionella pneumophila is the bacterium responsible for a group of pneumonia-type diseases collectively termed 'Legionellosis'. The diseases can be fatal or permanently debilitating. Although there are only 200 to 250 reported cases of Legionnaire's Disease in the UK each year, approximately half of which originate abroad, clusters of cases can occur and outbreaks have been linked with hot and cold water systems.

The disease is usually contracted by inhaling the bacteria in aerosol form i.e. the droplets of water created by a shower, fire hose, spray tap or even a standard tap. It is possible to inhale airborne bacteria after the water droplets have evaporated.

Legionella bacteria are commonly found in the water supply but usually in low numbers due to water temperature not being conducive to proliferation. Water temperatures in the range 20 to 45°C favour growth. At temperatures below 20°C the bacteria will lie dormant until more favourable conditions occur, at which point they will begin to multiply. There is also evidence to

suggest that the bacteria become more virulent at a temperature of 37°C. To kill the bacteria, the water must be heated to a minimum of 60°C.

A supply of nutrients is also necessary for the bacteria to thrive. These can be commonly found in water systems which are not routinely inspected or cleaned and are ageing. Nutrients include other bacteria, amoebae and algae. Sediment, scale, sludge and biofilms may help to harbour Legionella; therefore it is prudent not to allow these to build up.

2. Legislation

Although there is no legislation specific to Legionella, the **HSC Approved Code of Practice 'The control of legionella bacteria in water systems'** was published in 2001 with some fundamental changes from the previous **ACOP 'L8'**, making it more onerous and broadening its scope. Certain types of water system were specifically excluded previously and the emphasis was on the larger storage systems, of which we have relatively few.

The ACOP is not an Act or a Regulation, however it enjoys legal status. If we are prosecuted under the **Health and Safety at Work Act 1974** following a Legionnaire's Disease outbreak, we have to prove that we followed the relevant provisions of the ACOP or that we complied with the law in some other way. The ACOP is intended to offer practical advice on how to comply with the law. The **guidance** laid down in the ACOP is not compulsory, however it illustrates good practice and Health and Safety inspectors seeking to secure compliance with the law may use this as a point of reference.

Legionella pneumophila is classed as a biological agent by the HSE and is listed as a Class 2 Hazard under the **COSHH Regulations 2002**. It is our statutory duty to prevent or control exposure to biological agents. Legionnaire's Disease is reportable under **RIDDOR 1995**, provided the employer is notified by the employee's G.P.

The **Health and Safety at Work Act 1974** is the legislation which will be judged to have been disregarded if we do not implement a control strategy in accordance with the ACOP. The **Safety Representatives and Safety Committee Regulations 1977** and the **Health and Safety (Consultation with Employees) Regulations 1996** also require us to discuss health and safety matters with Trade Union representatives and inform them of any control measures in place.

3. Compliance with the Approved Code of Practice (ACOP)

The ACOP states: *'To comply with their legal duties, employers and those with responsibilities for the control of premises should:*

- a) *identify and assess sources of risk – this includes checking whether conditions are present which will encourage bacteria to multiply, e.g. is the water temperature between 20-45°C; there is a means of creating and disseminating breathable droplets, e.g. the aerosol created by a shower or cooling tower; and if there are susceptible people who may be exposed to the contaminated aerosols;*
- b) *prepare a scheme for preventing or controlling the risk;*
- c) *implement, manage and monitor precautions – if control measures are to remain effective, then regular monitoring of the systems and the control measures is essential. Monitoring of general bacterial numbers can indicate whether microbiological control is being achieved. Sampling for legionella is another means of checking that a system is under control;*

- d) *keep records of the precautions; and*
- e) *appoint a person to be managerially responsible.*

To meet the requirements of the ACOP and carry out our duties as an employer, we must:

- Undertake Risk Assessments, including schematics of the water system
- Agree and ratify a scheme for preventing/controlling the risk
- Implement a monitoring strategy
- Maintain registers at each of our premises with a central file held by the Property Services section.

4. Water systems

The ACOP states that '*A reasonably foreseeable risk of exposure to legionella bacteria exists in:...(c) hot and cold water systems...*' (Part 1, section 19). Some types of hot and cold water systems present a greater risk than others and all types can be found in our premises. A brief explanation of the different types of system is detailed below:

Cold water systems

1. Direct system i.e. mains cold water to all the outlets with no storage of water at all.
2. Storage system i.e. some or all of the outlets are served by a central cold water storage (CWS) tank.

Hot water systems

1. Instantaneous system i.e. all outlets are served by local, instantaneous water heaters which have no storage facility. They are fed directly by mains cold water.
2. Storage systems i.e. hot water is generated and stored either in a large capacity central calorifier feeding multiple outlets or in smaller calorifiers typically mounted above sinks/basins and serving local outlets.

Low risk systems

The low risk systems are those that have no stored water, due to mains cold water temperature being below the threshold for Legionella growth. There is little likelihood of a build-up of other bacteria, sediment or sludge in this type of system and these are all factors known to encourage growth of Legionella bacteria.

High risk systems

The high-risk systems employ either hot and/or cold water storage, the level of risk being presented by the temperature of the stored water. A correctly operated, properly maintained system should offer little risk.

A well-designed and maintained system will incorporate a suitably sized GRP/plastic cold water storage tank with insect screens on all connections and a properly fitted lid. The

distribution pipework will be thermally insulated where it runs in concealed spaces such as roof voids, riser ducts and false ceiling voids.

The hot water system will have an appropriately-sized storage calorifier, so as not to store excessive amounts of water for long periods of time, the storage temperature will be maintained at 60°C (optimum) but no lower than 55°C and no higher than 65°C. The distribution pipework will be thermally insulated where it runs in concealed spaces and there will be a pumped secondary return system, which enables water not 'drawn-off' at the outlets to be re-circulated back to the calorifier and re-heated. There will be no 'dead-legs' i.e. sections of pipe which are stagnant unless an outlet is in use, resulting in cooling of the water to below 45°C.

5. Level of risk

As an organisation, we represent a low risk in terms of the susceptibility of our employees to Legionellosis. It has been demonstrated that certain groups of people are more susceptible to developing the disease following exposure to the Legionella bacteria. These include immunosuppressed people e.g. cancer patients receiving chemotherapy, those with chronic kidney disease, those with chronic lung disease, smokers, diabetics and alcoholics. There is a greater tendency for men to catch the disease than women, especially those over 45 years of age.

We encourage access by the public to many of our buildings. The risk increases as members of the public may fall into any of the above categories.

The use of our buildings is also an important consideration. They are in the following categories:

1. Public building, e.g. pavilion, sports centres
2. Administrative offices, e.g. Knowle
3. Workshops / Depots
4. Public Toilets

A desktop survey was undertaken using the Building Asset List. All premises were assessed for the likelihood of legionella being present and rated High, Medium or Low.

Council offices are low risk, dependant upon system design, as there is likely to be a high usage of hot and cold water, which has the effect of flushing the systems through regularly. The bacteria will not have an opportunity to attain potentially dangerous levels if there is a regular flow of water through the system. Water temperatures are also more likely to fall within the required limits in this situation. Public access would increase the risk from low to medium.

The Sports Centres, identified as high risk, have a Watersafe Management agreement with a contractor, which comprises:

1. Annual inspection of all water tanks in line with ACOP L8.
2. Every quarter, water samples are taken from the water outlets. These are monitored, recorded and sent for microbiological testing. A report is then sent to the centre.
3. On a quarterly basis, the showerheads are cleaned and disinfected. This is also recorded. In addition centre staff routinely de-scale the showerheads.
4. All required monthly, quarterly, bi-annual and annual monitoring and management is carried out in line with ACOP L8

6. Risk Assessments

We currently hold a risk assessment and schematic for each building. These have been prepared to varying degrees of detail. We are required to update these regularly, or when we know a major change has taken place.

7. Proposed Scheme for Controlling the Risk

The scheme will be produced by Property Services following analysis of the desktop survey. It is likely to include the remedial works listed below:

- a) Replacement of CWS tanks where identified as badly corroded or non-compliant with the Water Regulations 1999.
- b) Inspection of CWS tanks on an annual basis to check for signs of corrosion or damage and the build-up of sediment or sludge.
- c) Chlorination of CWS tanks on an annual basis, where identified as necessary during an inspection.
- d) Thermal insulation of CWS tanks to prevent heat build-up in warm weather.
- e) Modifications to hot and cold water pipework to prevent stagnation of water.
- f) Annual inspection of hot water calorifiers.
- g) Thermal insulation of all hot and cold-water pipework in service voids.

It is not required that we carry out all works within a short time frame, merely that we recognise and identify the items of risk then programme the works to take place over a period of time. This could be 2 to 3 years, dependant upon the severity of the risk and as budget dictates.

8. Implementing the Monitoring Strategy

The monitoring of water temperatures is of vital importance in identifying whether we are at risk. Monitoring will take place at specific intervals dependant on the perceived risk. (See Appendix 2)

9. Record keeping

A logbook is provided for each premise, enabling temperature monitoring results and flushing/cleaning checks to be recorded.

10. Managerial responsibility

The ACOP Guidance recommends that a person with the appropriate level of authority is the responsible person e.g. a director or one who has financial control over expenditure. A degree of technical expertise is also required for this position.

In accordance with the ACOP the competent officers with this responsibility are noted in the risk assessments.

Who is responsible for delivery?

Property Services, Managers of relevant properties and external contractors.

Performance Monitoring

All premises are monitored as detailed in Appendix 2 and records are retained on site to ensure compliance with the Policy.

Policy Consultation

Health and Safety Adviser, Connaught Compliance Ltd (Water Hygiene)

Policy Review

This policy will be reviewed in 2 years.

Related Policies and Strategies

Health and Safety at Work.

BUILDING ASSET LIST – FEBRUARY 2010				Appendix 1
File no	UPRN	Name	Asset Used By	Risk Rating
75		AXMINSTER		
PM/75/01	75/0171B	Axe Valley Sports Centre	Leisure East Devon	H
PM/75/05	00/1001B	Public Toilets - West Street Car Park	Street Scene	L
PM/75/06	75/0166B	Millwey Rise Workshops	Street Scene	M
77		BEER		
PM/77/02	77/0172B	Public Toilets - Cliff Walk	Street Scene	L
41		BRANSCOMBE		
PM/41/01	41/0135B	Public Toilets – Branscombe Beach	Street Scene	L
22		BROADCLYST		
PM/22/01	22/0075B	Broadclyst Sports Hall	Leisure East Devon	H
33		BUDLEIGH SALTERTON		
PM/33/04		Public Toilets – Brook Street	Street Scene	L
PM/33/05	33/0076B	Public Toilets – Cliff Path	Street Scene	L
PM/33/06	33/0084B	Public Toilets – East End	Street Scene	L
PM/33/07	33/0081B	Public Toilets – Station Rd Car Park	Street Scene	L
79		COLYTON		
PM/79/01		Colyton Sports Centre	Leisure East Devon	H
PM/79/02	79/0175B	Public Toilets - Dolphin Street Car Park	Street Scene	L
01		EXMOUTH		
PM/01/02	01/0019B	Camperdown Terrace – EDDC Depot	Street Scene	H
PM/01/03	01/0274B	Changing Rooms – Withycombe Raleigh Common	Leisure East Devon	H
PM/01/05	01/0200B	East Devon Tennis Centre	Leisure East Devon	H
PM/01/06	01/0049B	Elizabeth Hall	Property Services	M
PM/01/07	01/0047B	Exmouth Pavilion	Leisure East Devon	H
PM/01/24	01/0215B	Public Toilets - Bus Station	Street Scene	L
PM/01/25	01/0050B	Public Toilets - Elizabeth Hall	Street Scene	L
PM/01/26	01/0029B	Public Toilets - Foxholes Car Park	Street Scene	L
PM/01/27	01/0062B	Public Toilets - Jarvis Close Car Park	Street Scene	L
PM/01/28	01/0045B	Public Toilets - Lifeboat Station	Street Scene	L
PM/01/30	01/0054B	Public Toilets - Magnolia Centre	Street Scene	L
PM/01/31	01/0012B	Public Toilets - Manor Gardens	Street Scene	L
PM/01/32	01/0031B	Public Toilets - Orcombe Point	Street Scene	L
PM/01/33	01/0004B	Public Toilets - Phear Park	Street Scene	L
PM/01/34	01/0014B	Public Toilets - Royal Ave	Street Scene	L
PM/01/36	01/0264B	Public Toilets - The Maer	Street Scene	L
PM/01/45	01/0022B	Sports Centre and Swimming Pool	Leisure East Devon	H
PM/01/48	01/0013B	Town Hall	Property Services	M
PM/01/55	01/0002B	Bowling Pavilion Phear Park	Leisure East Devon	M
PM/01/77	01/0003B	Phear Park Cafe	Leisure East Devon	L
PM/01/84	01/0034B	Toilets/Storage/Shelter/Etc - Queens Drive	Street Scene	L
60		HONITON		
PM/60/02	60/0148B	Allhallows - Pavilion	Communities	H
PM/60/04	60/0260B	Elmfield House - Thelma Hulbert Gallery	Communities	L

BUILDING ASSET LIST – FEBRUARY 2010
Appendix 1

File no	UPRN	Name	Asset Used By	Risk Rating
PM/60/14	60/0152B	Public Toilets – King St	Street Scene	L
PM/60/15	60/0161B	Public Toilets – Lace Walk Car Park	Street Scene	L
PM/60/17	60/0150B	Sports Centre	Leisure East Devon	H
PM/60/18	60/0151B	Swimming Pool	Leisure East Devon	H
PM/60/19	60/0164B	TIC - Lace Walk Car Park	Tourism	L
PM/60/20	60/0275B	East Devon Business Centre	Property Services	M
45		OTTERY ST MARY		
PM/45/01	45/0143B	Colin Tooze Sports Hall	Leisure East Devon	H
PM/45/06	45/0138B	Public Toilets – Flexton	Street Scene	L
PM/45/07	45/0140B	Public Toilets - Hind St Car Park	Street Scene	L
86		SEATON		
PM/86/02	86/0190B	Glass House & Stores – Seafield Gardens	Street Scene	M
PM/86/08	86/0194B	Public Toilets – Harbour Road	Street Scene	L
PM/86/09	86/0179B	Public Toilets - Chine	Street Scene	L
PM/86/10	86/0176B	Public Toilets - Marsh Road	Street Scene	L
PM/86/12	86/0182B	Public Toilets - Seaton Hole	Street Scene	L
PM/86/13	86/0261B	Public Toilets – West Walk	Street Scene	L
PM/86/15	86/0189B	Tennis Pavilion - Seafield Gardens	Leisure Services	M
PM/86/17	86/0177B	Town Hall, Seaton	Leisure Services	M
39		SIDMOUTH		
PM/39/06	39/0116B	Knowle – Gardeners Depot	Street Scene	L
PM/39/07	39/0115B	Knowle – Council Offices	Property Services	M
PM/39/08	39/0100B	Manor Pavilion & Arts Centre Sidmouth	Communities	L
PM/39/09	39/0120B	Manstone Depot	Street Scene	H
PM/39/16	39/0104B	Public Toilets – Connaught Gardens	Street Scene	L
PM/39/17	39/0119B	Public Toilets – Long Park Arcot Road	Street Scene	L
PM/39/18	39/0096B	Public Toilets – Market Place	Street Scene	L
PM/39/19	39/0126B	Public Toilets – Memorial Hall Sidbury	Street Scene	L
PM/39/20	39/0110B	Public Toilets & Shelter - Port Royal	Street Scene	L
PM/39/21	39/0128B	Public Toilets & Shelter - Sidford Cross	Street Scene	L
PM/39/22	39/0112B	Public Toilets – Triangle	Street Scene	L
PM/39/31	39/0123B	Sidmouth Sports Centre	Leisure East Devon	H
PM/39/33	39/0108B	Swimming Pool	Leisure East Devon	H
10		WOODBURY		
PM/13/01	10/0074B	Public Toilets – Flower Street	Street Scene	L

Legionella Precautions Checklist

Check No.	Task	Frequency
1	Flush through and purge to drain little used outlets, e.g. showers. Care must be taken to keep aerosols to a minimum.	Monthly
2	Check temperatures in the flow and return at calorifiers. Flow temperature should be at least 60°C and return temperature should be at least 50°C.	Monthly
3	Check the temperature of the water at the first and last tap (sentinel) or thermostatic mixing valve (TMV) on each hot water circuit. The temperature of the water should be 50°C within a minute of running the water.	Monthly
4	Check that the water is below 20°C after running the cold water sentinel taps for up to two minutes.	Monthly
5	Check cold water storage tank temperatures remote from the ball valve and mains temperature at the ball valve. Temperatures must not normally exceed 20°C.	Annually
6	Check the incoming water inlet at least once in the winter and once in summer. The water should be below 20°C at all times but 25°C is permissible.	6 Monthly
7	Check representative hot water taps for temperature as (3) on a rotational basis, e.g. several non-sentinel taps per year so that over a period of 3 years all hot water taps and TMVs have been checked.	Annually
8	Check representative cold water taps for temperature as (4) on a rotational basis, e.g. several non-sentinel taps per year so that over a period of 3 years all cold water taps have been checked.	Annually
9	Dismantle, clean and descale shower heads and hoses that are in normal use.	Quarterly
10	Check calorifier drain water for dirt and debris and visually inspect the internal surfaces of calorifiers and check for debris in the base, where necessary following risk assessment.	Annually
11	Visually inspect cold water storage tanks to check the condition of the inside of the tanks and the water within them. Check that lid is in good condition and fits closely, insect screen on overflow intact, thermal insulation on tanks should be in good condition, water surface should be clean and no debris in tanks.	Annually
12	Consider the risks associated with ponds, automatic watering systems for hanging baskets and water features. Clean, disinfect and descale as necessary.	Annually
13	Ensure that contractor cleans and disinfects resin and brine tanks on water softeners.	Annually