Legionnaires Disease Precautions Policy

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Scope

This policy applies to all NAS properties.

Where NAS uses properties that do not belong to them then it is important to ensure that the landlord has a scheme for controlling the risk and that there is a clear understanding of who does what. This policy shows what a manager in a leasehold building should be routinely checking.

Properties belonging to NAS must have a scheme that includes consideration of all of the checks shown in the relevant parts of this policy.

Policy Summary

The purpose of this policy is to reduce the risk of people the NAS supports and others contracting Legionnaires' or similar diseases from contaminated water.

Legionella Bacteria

Legionella is a type of bacteria, which is common in natural and artificial water systems; even in vehicle washer bottles where no screen wash has been added! They can survive at low temperatures; thrive at temperatures between 20ºC and 45ºC and are killed at higher temperatures. The collective term for the group of diseases caused by legionella is legionellosis.

Legionnaires' disease is the most serious illness caused by Legionella. The infection is caused by breathing in aerosols (minute particles) of water contaminated by the bacteria. It can be fatal, and is particularly harmful to vulnerable people.

Initial symptoms include high fever, chills, headache and muscle pain. A dry cough may develop and most patients suffer difficulty with breathing. Diarrhoea, vomiting, confusion and delirium can also be symptomatic of Legionnaires disease.

Managers in Control of Premises are managerially responsible and must:

- identify and assess sources of risk;
- prepare a scheme for preventing or controlling the risk;
- implement, manage and monitor precautions;
- keep records of the precautions.

Identification and Assessment of the Risk

The person carrying out the assessment must have access to competent help. Many of the factors, which need to be considered to produce a suitable and sufficient risk assessment, require technical knowledge. For example, in most buildings it will be necessary to begin the assessment by carrying out a survey of the water systems and producing an up to date schematic plan and register of all associated plant and relevant items. Knowledge of their function and their potential to create a hazard is essential.
Consideration must be given to:

- the potential for droplet formation;
- water temperature;
- the likely risk to those who may inhale the water droplets;
- the prevailing conditions which could proliferate/sustain bacteria;
- cleanliness of the systems;
- system features such as dead legs, calorifier and tank dead spots, water softeners, etc;
- potential for deposition of particulate material, scale, corrosion and fouling in general e.g. birds and vermin.

Preparation of a Scheme for Preventing or Controlling the Risk

Where risks have been identified a written statement including an overview of remedial actions must be produced. An action plan may also need to be developed.

Where the manager responsible is unable to carry out control measures and strategies using expertise within the NAS then it should be drawn from outside.

Precautions should, where appropriate, include the following:

- control of the release of water spray;
- avoidance of water temperatures and conditions that favour the proliferation of legionella and other micro-organisms;
- avoidance of water stagnation, e.g. cold water storage tanks connected such that that there is no through-flow of water, regular running of little used outlets;
- avoidance of the use of materials that harbour bacteria and other micro-organisms, or provide nutrients for microbial growth;
- maintenance of the cleanliness of the system (e.g. regular de-scaling of calorifiers and cleaning of shower heads) and the water in it;
- use of water treatment techniques;
- action to ensure the correct, safe operation and maintenance of the water system;
- checks in accordance with HS-0426.

Domestic hot water systems in the NAS must be operated at 60ºC (55ºC minimum) but where there is a danger of scalding, the system temperature is to be reduced by thermostatic mixing valves positioned within 1 metre of the outlet.

The scheme should incorporate, at least, the precautionary measures shown in the relevant appendix to this policy, as follows:

Appendix 1 - Precautions for Small Properties Served by Non-Storage Water Heaters

Appendix 2 - Precautions for Small, Leased Properties

Appendix 3 - Precautions for Freehold Properties

The effectiveness of any measures must be monitored and the assessment reviewed at least every two years.

Records

The responsible manager shall ensure that appropriate records are kept, including:

- the persons responsible for managing, conducting the risk assessment and implementing the written scheme;
- the significant findings of the assessment of risk;
- an up-to-date plan showing the layout of the system and plant;
- a description of the correct and safe operation;
- the precautions to be taken;
- a description of any monitoring, inspections, tests or checks carried out along with results, dates and frequency;
- details of visits by contractors and consultants;
- cleaning and disinfection procedures together with associated reports and procedures;
- water analysis reports information.

Forms appended to this policy may be used for recording regular tasks.

Records must be kept for 5 years.

Action in the Event of an Outbreak

An outbreak is, officially, defined as 2 or more confirmed cases of legionellosis occurring in the same locality within a 6 month period. However, for the NAS any case of legionellosis (Legionnaires disease or other legionella related disease) must prompt the following immediate action:

- Decommission the system;
- Notify manager and Head of SQE;
- Consult with the HSE/Local Authority before proceeding further;
- Take water samples;
- Arrange for emergency cleaning and disinfection of the system;
- Re-commission the system when the test results show non-detection of legionella and/or HSE/Local Authority grants permission.

Key Management Actions

- Be familiar with the specific arrangements that are in place to prevent/control the risk.
- Carry out regular risk reduction measures and, where necessary, employ contractors for the more technical aspects.
- Keep records.

Appendix 1 - Precautions for Small Properties Served by Non-Storage Water Heaters

Properties in this category tend to be small residential properties, or offices, served by a combination (combi) boiler, or instantaneous electric water heaters.

Chk No.	Task	Frequency
(1)	Flush through and purge to drain little used outlets, e.g. showers, unused accommodation. Care must be taken to keep aerosols to a minimum.	Weekly
(2)	Check temperatures at the water heater. Temperature should be at least 60ºC.	Monthly
(3)	Check that the water is below 20ºC after running the cold water sentinel taps for up to two minutes.	Monthly
(4)	Dismantle, clean and de-scale shower heads and hoses that are in normal use. Infrequently used showers may need less frequent attention.	Quarterly

Legionnaires Precautions Record (Non-Storage) Property Name _____ Period _____ to _____

"Check" Nos. in brackets refer to guidance notes. "Item Description" must describe the specific heater, sentinel tap, etc tested/checked

Item Description	Weekly Check	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
(1) Flush	Initials																								
	Date																								
Item Description	Weekly Check	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
(1) Flush	Initials																								
	Date																								

Item Description	Weekly Check	49	50	51	52	Comments (e.g. outlets flushed)
(1) Flush	Initials					
	Date					

	Initials																								
	Date																								
		January		February		March		April		May		June		July		August		Sept		October		Nov		Dec	
Monthly / Quarterly Check	Item Description	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
(2) 1st Water Heater ºC																									
(2) 2nd Water Heater ºC																									
(3) 1st Cold sentinel ºC																									
(3) 2nd Cold sentinel ºC																									
(4) Shower heads clean																									

"1" and "2" columns for each month are for entry of temperatures from nearest (1) and furthest (2) outlets.
1st and 2nd rows allow for recording of temperatures in properties where there are more than water heaters.

Record checked by Manager _____ Date _____

Appendix 2 - Precautions for Small, Leased Properties

Chk No.	Task	Frequency
(1)	Flush through and purge to drain little used outlets, e.g. showers, unused accommodation. Care must be taken to keep aerosols to a minimum.	Weekly
(2)	Check temperatures at calorifiers (hot water cylinders). Temperature should be at least 60ºC.	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 50ºC within a minute of running the water.	Monthly
(4)	Check that the water is below 20ºC after running the cold water sentinel taps for up to two minutes.	Monthly
(5)	Dismantle, clean and de-scale shower heads and hoses that are in normal use. Infrequently used showers may need less frequent attention.	Quarterly

Legionnaires Precautions Record (Leased) Property Name _____ Period _____ to _____

"Check" Nos. in brackets refer to guidance notes. "Item Description" must describe the specific calorifier, sentinel tap, TMV, etc tested/checked

Item Description	Weekly Check	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
(1) Flush	Initials																								
	Date																								
Item Description	Weekly Check	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
(1) Flush	Initials																								
	Date																								

Item Description	Weekly Check	49	50	51	52	Comments (e.g. outlets flushed)
(1) Flush	Initials					
	Date					

	Initials																								
	Date																								
		January		February		March		April		May		June		July		August		Sept		October		Nov		Dec	
Monthly / Quarterly Check	Item Description	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
(2) 1st Calorifier ºC																									
(2) 2nd Calorifier ºC																									
(3) 1st Hot sentinel ºC																									
(3) 2nd Hot sentinel ºC																									
(4) 1st Cold sentinel ºC																									
(4) 2nd Cold sentinel ºC																									
(5) Shower heads clean																									

"1" and "2" columns for each month are for entry of temperatures from nearest (1) and furthest (2) outlets.
1st and 2nd rows allow for recording of temperatures in properties where there are more than calorifiers or hot/cold water circuits.

Record checked by Manager _____ Date _____

Appendix 3 - Precautions for Freehold Properties

Chk No.	Task	Frequency
(1)	Flush through and purge to drain little used outlets, e.g. showers, unused staff accommodation. Care must be taken to keep aerosols to a minimum.	Weekly
(2)	Check temperatures in the flow and return at calorifiers. Flow temperature should be at least 60ºC and return temperature should be at least 50ºC.	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 50ºC within a minute of running the water.	Monthly
(4)	Check that the water is below 20ºC 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 20ºC.	6 Monthly
(6)	Check the incoming water inlet at least once in the winter and once in summer. The water should be below 20ºC at all times but 25ºC 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 de-scale shower heads and hoses that are in normal use. Infrequently used showers may need less frequent attention.	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 and water features. Clean, disinfect and de-scale as necessary.	Annually
(13)	Ensure that contractor cleans and disinfects resin and brine tanks on water softeners.	Annually

Weekly Legionnaires Precautions Record (Freehold Check No.1) Property _____ Period _____ to _____

Initials																									
Date																									
Location / Wk No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
1																										
2																										
3																										
4																										
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20																										

Outlets should be flushed for several minutes in order to reduce the number of legionella bacteria.

Record checked by Manager _____ Date _____

Non-Weekly Legionnaires Precautions Record (Freehold Checks 2 to 13) Property _____ Period _____ to ___

Initials "Check" Nos. in brackets refer to guidance notes Date "Item Description" must describe the specific calorifier, sentinel tap, TMV, tank, etc tested/checked																								
		January		February		March		April		May		June		July		August		Sept		October		Nov		Dec	
Check	Item Description	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
(2) Calorifier ºC																									
(2) Calorifier ºC																									
(3) Hot sentinel ºC																									
(3) Hot sentinel ºC																									
(3) Hot sentinel ºC																									
(3) Hot sentinel ºC																									
(4) Cold sentinel ºC																									
(4) Cold sentinel ºC																									
(5) Cold tank ºC																									
(5) Cold tank ºC																									
(6) Cold supply ºC	Main Stop Valve																								
(7) Hot rep taps ºC																									
(7) Hot rep taps ºC																									
(7) Hot rep taps ºC																									
(8) Cold rep taps ºC																									
(8) Cold rep taps ºC																									
(8) Cold rep taps ºC																									
(9) Shwer hds clean																									
(10) Calorifier check	All																								
(11) Cold tanks chk	All																								
(12) Ponds/external																									
(13) Softener																									

Two columns are provided for some items shown above to enable the entry of, for example, first and last sentinel tap records (i.e.1= first & 2=last) and inlet and outlet temperatures (i.e. 1=inlet & 2=outlet).

Record checked by Manager _____ Date _____