



Legionella and Water Management Compliance Code

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Contents

1.0 Introduction	3
2.0 Responsibilities	3
3.0 What is legionella diseases?	3
4.0 Requirements for managing legionella within WNAT	3
5.0 Legionella Risk Assessment (LRA)	4
5.1 Remedial actions	4
5.2 Monitoring Actions	4
6.0 Water Management Contract	4/5
6.1 Potable and Non-potable water supplies	5
7.0 Carrying out work on water supplies	5
8.0 Training	5
9.0 Action in the event of a water system testing positive for bacteria	6
9.1 Confirmed case or outbreak of Legionellosis	6

1. Introduction

This document provides information on legionella risks and required management actions for all sites associated with West Norfolk Academies Trust (WNAT).

2. Responsibilities

All managers and employees must follow the procedures outlined in this Compliance Code in order to carry out their duties and as outlined in the WNAT H&S Policy.

The headteacher holds overall responsibility for H&S at their respective sites, however, the day to day management of the requirements can be delegated to suitable staff such as Site Managers, Caretakers as a compliance requirement.

The Trust Estates Manager will monitor adherence to this Compliance Code through regular site inspections

3. What is Legionnaire's disease?

Legionnaire's disease is a potentially fatal form of pneumonia. Those most at risk include smokers, alcoholics and people with cancer, diabetes and chronic respiratory complaints or kidney disease.

The most likely infection route is through direct inhalation of bacteria carried by water droplets as an aerosol, which can penetrate deep into the lungs. Infection begins quite abruptly with flu-like symptoms, accompanied by a dry cough which soon develops. Many people experience difficulty with breathing. The disease is effectively treated with specific antibiotics, but the diagnosis can only be determined by laboratory tests.

Legionella bacteria occur naturally in locations such as rivers, lakes, and reservoirs, but in the right conditions it can also be present in domestic water systems, e.g. water tanks, supply pipework, water system components such as expansion vessels and released at the point of use, e.g. taps, shower heads etc. Growth will be encouraged where water ceases to flow or becomes contaminated with materials that may provide a source of nutrition. Temperature also plays an important role.

Effect of temperature on legionella lifecycle

70 °C	60 °C	50 °C	Between 37°C and 46°C	Below 37°C	Below 20°C
Killed instantly	Lives for about a minute	May live for hours	Optimum temperature for reproduction	Reproduction rate decreases	Reproduction rate is insignificant

4. Requirements for managing Legionella within WNAT

Each premises must:

- Have a Legionella Risk Assessment (LRA) identifying and evaluating potential risk sources
- Have a schematic of the water system.
- Have in place a water management contract with a suitably experienced water management contractor.
- Have appropriately trained staff on site
- Keep records of actions taken to implement this scheme, including remedial works, monitoring and maintenance checks

5. Legionella risk assessment (LRA)

There is a legal requirement to have in place an in date LRA for each site and due to the complexities of most systems the LRA must be completed by a suitably experienced contractor.

The legal requirement to review the LRA every 2 years was removed, however, it is WNAT policy to ensure that the review takes place irrespective of this change. This is due to the high number of vulnerable people (Students) who could be exposed to bacteria. There are other times where a review of the LRA would be required and these are as follows.

- Review every 2 years
- Review when there has been a significant change or addition to the system
- Review following any confirmed case of illness associated with the water system.

5.1 Remedial actions

The LRA will identify any parts of the water system presenting an increased risk of legionella growth, e.g., redundant pipework where water can stagnate, missing water tank lid that might allow contamination, storage temperature set too low etc.

The responsible person must develop a plan to address these and the action should be signed off and dated as confirmation as they are completed.

Action plans should be shared with assessors conducting the LRA review.

5.2 Monitoring actions

WNAT utilises a compliance management tool in the form of an Estates Management System (EMS). This is to be used to track all recommendations & remedial actions identified following a review of the LRA or following system checks carried out as part of the water management contract.

The Site Manager (High Schools) and the Trust Estates Manager (Primary Schools) are to ensure the EMS is updated following the LRA review and upon receipt of any service, inspection reports received as part of the water management contract.

Actions should be addressed in priority order and the headteacher should be made aware of any issue that may impact H&S or the operational effectiveness of the site.

The Trust Estates Manager will review all sites termly and feed back to the relevant headteacher as part of the Termly H&S requirement.

6. Water Management Contract

A Water Management contract must be in place for all sites. The contract will ensure that all checks are carried out, as below, and that reports are provided to highlight potential issues or areas of increased risk.

Water Management checks should include the following:

- Monthly Temperature checks
- Cold Water Storage Tank (CWST) inspections
- Bacteria Testing of non-potable water supplies (If applicable)

- Bacteria Testing of swimming pools
- Failsafe Testing of Temperature Control Valves (TMV)
- Flushing of Pressure vessels
- Shower cleaning (If applicable)

NOTE: CWST cleaning and disinfection will be required as and when recommended following CWST inspections. Tank cleans are not required as a matter of course.

There are aspects that the Water Management Contract will not include and these should be conducted by the site team as follows

- Weekly flushing of seldom used outlets such as external taps, etc.
- Flushing of all outlets following a period of extended closure such as school holidays.

6.1 Potable and Non-Potable Water Supplies

Potable water is stored water that is suitable for human consumption. Potable water has more uses than just drinking, as it is the water that we use for washing our kitchen dishes and utensils. For any purpose that might result in the ingestion of water or when water comes into contact with the skin, potable water is used in these instances.

For a water tank to store potable water it has to conform to the Water Regulations Advisory Scheme (WRAS) so that the water stored is safe for drinking. Where it is confirmed that the tank is WRAS compliant, potable water does not require bacteria testing as this is done by the water supplier.

Non-potable water differs from potable water in the way that it is not appropriate for human consumption. Although non-potable water is not suitable for human contact, it has a wide variety of uses that are essential in our everyday lives from plumbing to gardening applications. From washing machine water to toilet and urinal flushing, non-potable water is also essential for many things that we do. Non-potable water tanks are unsafe for collecting water for consumption purposes, as they contain a porous surface which can collect bacteria and affect the stored water. In plastic water tanks, gases can also be given off to further affect the water in the tank. All outlets supplied by non-potable tanks are to be labelled as NOT DRINKING WATER.

If in doubt then CWST inspection, clean (as required) and bacteria testing should be carried out until such time the tank type is confirmed as part of the LRA review

7. Carrying out work on water systems

All maintenance work, additions and modifications to pipework and water systems should be carried out in a way that eliminates or minimises legionella risks, e.g. by specifying Water Regulations Advisory Scheme (WRAS) fittings approved for use on the UK Water Supply System.

8. Training

Those tasked with undertaking monitoring and maintenance tasks such as flushing should complete annual Legionella awareness training.

It is recommended that managers also complete Legionella Awareness training to ensure they have an overview of the requirements.

9. Action in the event of water sample testing positive for bacteria

Following confirmation of a failed bacteria report the affected system should be isolated immediately and restricted. The schematic provided as part of the LRA will assist in identifying the affected areas of the site.

The system should be physically isolated and drained as far as possible.

Offsite-

Where the failure is due to contamination of the supplied water to the site the responsibility for remedial work will fall to the water supply company. Should there be a delay that will impact the operation of the school the supplier should provide suitable provision to enable normal operation such as temporary potable water tanks. Headteachers are responsible for assessing the impact to the normal operation of the school considering potential loss of catering provision and for acting accordingly.

Onsite-

Where the failure has been associated with an on-site supply such as a contaminated tank, the tank should be cleaned and the earliest opportunity and a bacteria retest carried out. The headteacher is responsible for assessing the impact to the school and for acting accordingly.

Once the issue has been confirmed as resolved the system can be reinstated. All outlets must be flushed prior to initial use

9.1 Confirmed case or outbreak of Legionellosis

In the event that:

- The school is notified an individual has been diagnosed with Legionnaire's Disease or;
- An outbreak of the disease (defined as two or more confirmed cases of Legionella occurring in the same locality within a six-month period) is suspected that may be attributable to the school water system or;
- Urgent action is required following routine inspections;

The following must be carried out;

- Isolate all water supplies
- Arrange for the testing of all onsite Cold-Water Storage Tanks (CWST) including integral tanks contained within electric water heaters.
- Purge all pressure vessels and hot water storage tanks
- Clean and disinfect CWST as required

The headteacher is responsible for assessing the impact to the operation of the school and should act accordingly.