



Legionella Risk Assessment Reviewer Guidance – Building Hot & Cold Water Systems
Reference: HSE Control of Legionella Bacteria in Water Systems: Audit Checklists C200

Maytree Infants & Nursery School

Risk Assessment Review

31st July 2017



Legionella Risk Assessment Reviewer Guidance – Building Hot & Cold Water Systems
Reference: HSE Control of Legionella Bacteria in Water Systems: Audit Checklists C200

Property Name & Description: Maytree Infants & Nursery School			Review Date: 31st July 2017
Responsible Person(s) Name & SCC Appointment: Jan Goatley (Head Teacher) Mike Cave (Site Manager)			Last Review: 13th July 2015
Compliance & Control Measure Checks	Yes	No	Comments/Observations
Have there been changes (or being proposed) to the use of the property in which the water systems are installed?		NO	
Have there been changes (or being proposed) to the water systems or their use?		NO	
Is there new information about potential risks or control measures?		NO	
Do the results of monitoring indicate that control measures are no longer effective?		NO	
Are the roles & responsibilities of all staff involved in control measures clearly defined in writing including responsible persons(s) & contractors?		NO	The Responsible person and deputies were not seen nominated in writing within the logbook documentation..
Have the persons nominated to carry out control measures including responsible person(s) received appropriate training?		NOT KNOWN	
Has there been a legionella bacteria incident associated with the water systems in the property?		NOT KNOWN	

Legionella Risk Assessment Reviewer Guidance – Building Hot & Cold Water Systems

Reference: HSE Control of Legionella Bacteria in Water Systems: Audit Checklists C200

Risk Assessment, Written Scheme & Property/System Change Checks			
Risk Assessment	Yes	No	Comments/Observations
Does the Risk Assessment identify foreseeable risks & include an up to date schematic of the water systems?	YES		Drawings have been updated at the time of this 2017 review.
Does the Risk Assessment include the measures & precautions to be taken to control foreseeable risks?	YES		Aquadition risk assessment seen filed in another folder.
Written Scheme			
Are inspection & maintenance measures identified in the Risk Assessment being carried out?	YES		Temperature Monitoring is being carried out.
Have remedial works identified in the Risk Assessment & subsequent reviews to minimise foreseeable risks been completed?	SOME		Water storage tanks removed along with booster set; all cold water s now from the mains water services. First floor flat calorifier has been removed along with associated pipe work.
Are the records of water system temperature monitoring & flushing representative of control measures, & up-to-date?	YES		Temperature monitoring is up to date up to June 2017. Flushing records were up to date.
Property & System Changes			
Have changes to property occupancy resulted in fewer occupants, intermittent occupation, or partial closure?		NO	Assumed school running at full capacity.
Have changes or modifications to the water systems resulted in low use outlets; dead legs; redundant service equipment or additional fittings e.g. TMV's?	YES		Nursery shower not used but flushed weekly. Deadleg pipe work still in place. TMVs fitted.
Are there any other aspects of the water system including its design, operation & maintenance that have increased foreseeable risks?	YES		Calorifier flow and return at present is not being monitored monthly and recorded in the logbook.



Legionella Risk Assessment Reviewer Guidance – Building Hot & Cold Water Systems
Reference: HSE Control of Legionella Bacteria in Water Systems: Audit Checklists C200

Risk Was (Circle)	Insignificant	Low	Medium	High	Uncertain
Risk Now (Circle)	Insignificant	Low	Medium	High	Uncertain

Remedial action to be taken	By Whom	By When
<p>Details of the responsible persons and deputies along with contactors carrying out monitoring should be recorded within the logbook documentation. Ensure records are kept in a satisfactory order and are legible. High</p> <p>This has not been entered in the new logbook issued by Freston Water treatment. High</p>		
<p>Remove all deadleg pipe work. High</p> <p>This has not been carried out. High</p>		
<p>Ensure the flat calorifier is adjusted to store hot water at 60.0c at all times; start monthly temperature monitoring of this calorifier and record in the logbook documentation. High</p> <p>The flat calorifier has now ben removed along with all associated pipe work. Low</p>		
<p>Monitor main calorifier flow and return temperatures monthly and record in logbook documentation. High</p> <p>This at present is not being carried out by Freston Water Treatment. High</p>		
<p>Ensure the shower is used on a regular basis or flush at least on a weekly basis; consider removal if not required along with all associated pipe work. High</p> <p>The showerhead has been removed and unit is flushed weekly. Medium</p>		



Legionella Risk Assessment Reviewer Guidance – Building Hot & Cold Water Systems
Reference: HSE Control of Legionella Bacteria in Water Systems: Audit Checklists C200

Risk Was (Circle)	Insignificant	Low	Medium	High	Uncertain
Risk Now (Circle)	Insignificant	Low	Medium	High	Uncertain

Remedial action to be taken	By Whom	By When
Consider removal of calorifier in flat and replace with point of use water heaters; this would remove the risk of stored water. High The flat calorifier and all associated pipe work have been removed. Low		
Clean and descale showerhead at least on a quarterly basis or at the rate of fouling and record in logbook documentation. Medium The showerhead is no longer used and has been removed. Low		
Flush all infrequently used outlets weekly and record when carried out. Continue during shut down periods and school holidays. Medium Weekly flushing is being carried out and recorded. Medium		
Maintain and service TMVs as per manufacturer’s recommendations. Medium TMVs are being serviced and maintained on a six monthly basis by the site manager and recorded when carried out. Medium		
Continue to clean and disinfect cold water storage tank annually if required. Medium The water storage tanks have now been removed. Low		
Audit logbooks at least on an annual basis; record when carried out. Medium No audits have been seen for the new logbook documentation. Medium		



Legionella Risk Assessment Reviewer Guidance – Building Hot & Cold Water Systems
Reference: HSE Control of Legionella Bacteria in Water Systems: Audit Checklists C200

Compliance & Control Checks	Reviewer notes
Have responsible person(s) considered whether foreseeable risks could be eliminated?	Refer to School / Southampton City Council.
Have the responsible person(s) & deputies been nominated in writing?	Responsible person and deputies have not been nominated in writing and recorded in the new logbook documentation.
Are responsible person(s)/deputies contact details available in the event of an emergency?	No responsible person or deputies contact details were seen within the logbook documentation.
Are the roles & responsibilities of all Council staff, & contractors involved in control & compliance measures identified in writing?	No roles and responsibilities of council and contractors involved in control and compliance measures were seen in writing within the log book documentation.
Have they all received appropriate training?	No training records were seen for any staff or contractors. Refer to Southampton City Council
Has the competence of contractors been checked and appropriate documentation held on file?	Refer to School / Southampton City Council.
Have other Health & Safety issues been actioned e.g. COSHH/MHSWR assessments for treatment chemicals and flushing routines?	Refer to Contractors used by School.
Do responsible person(s) keep a log of water system defects and follow up on progress?	All system defects are reported to Southampton City Council / contractors.
Do the responsible person(s) have a budget for remedial works and are they aware of the programme for completion?	Refer to School / Southampton City Council.



Legionella Risk Assessment Reviewer Guidance – Building Hot & Cold Water Systems
Reference: HSE Control of Legionella Bacteria in Water Systems: Audit Checklists C200

Risk Assessment, Written Scheme & Property/System Change Checks	Reviewer notes
Does the risk assessment include all water systems in the building(s) including e.g. fire hose reels, spray fountains, dehumidifiers etc?	Assumed yes.
Does the water system schematic show and identify all equipment & outlets including water softeners, TMV's, pumps, principal valves, stand-by equipment, showers, washbasins, water supply origin & systems out of use etc?	Drawings have been updated at the time of this 2017 review.
Does the Written Scheme contain the following: •System operating instructions? •Precautions to be taken when operating the system? •Details of the monitoring checks to be carried out on the system?	NO YES YES
Have changes to the system been recorded in the water system logbook?	No records were seen within the logbook documentation.
How are changes to the system managed & approved including approval by the responsible person(s)?	Refer to School / Southampton City Council.
How are remedial works co-ordinated, funded and approved including programme priorities?	Refer to School / Southampton City Council.



Legionella Risk Assessment Reviewer Guidance – Building Hot & Cold Water Systems
Reference: HSE Control of Legionella Bacteria in Water Systems: Audit Checklists C200

System Design & Construction	Reviewer notes
Are the water systems designed in accordance with BS6700: 1997 & the Water Supply (Water Fittings) Regulations 1999 as amended by latest WRAS guidance?	Visual pipe work appeared to be copper and galvanised metal.
Do any of the materials used in pipe systems & fittings support bacterial growth or corrosion?	Galvanised metal pipe work still on systems; most pipe work is hidden from view in ceiling voids.
If TMV's are fitted are they sited within 2m of the outlet(s) served?	TMVs fitted appear to be within 2metres of outlets.
Cold Water System	
Have low use outlets been installed upstream of high use outlets?	Flushing should be carried out weekly on infrequently used outlets and during school holidays and shut down periods.
Has cold water storage volumes been assessed for turnover (ideally 12 hours) & stagnation risk?	N/A
Is cold & hot water pipe work kept separated and adequately insulated?	Most pipe work is hidden from visual inspection in ceiling voids; unable to view pipe work in ceiling spaces due to risk of asbestos.
Are cold water tanks fitted with covers & insect screens, located in a cool well-insulated space, & safely accessible?	N/A
Are multiple CWST's configured in duty/stand-by mode and not operated in parallel?	N/A



Legionella Risk Assessment Reviewer Guidance – Building Hot & Cold Water Systems
Reference: HSE Control of Legionella Bacteria in Water Systems: Audit Checklists C200

System Design & Construction	Reviewer notes
Hot Water Systems	
Is Calorifier storage capacity capable of maintaining a DHW distribution temperature of at least 50°C during maximum demand periods?	1 x Hot water calorifier appear to be capable of maintaining water temperatures at peak times. Calorifier was shut down at the time of this 2017 review due t the school holiday period.
Are multiple calorifiers connected in parallel?	N/A
Is the calorifier(s) fitted with the following: <ul style="list-style-type: none"> •Functioning drain valve? •Temperature gauges on the flow & return? •An access panel? •A shunt pump and timer, timed to heat the calorifier to over 60°C for at least an hour a day? •Adequate primary & secondary pipe work insulation? 	Calorifier in plant room. Not seen No Not seen No Yes
Do electrically heated hot water heaters deliver water instantaneously at 50°C or above?	Refer to monitoring records.
Is there a risk of scalding e.g. in buildings used by infants (under 5 years) the disabled or the elderly?	Possible risk to young children.
Have 'Very Hot' water labels been fitted to outlets used by the public including school children?	No hot water warning labels are fitted.



Legionella Risk Assessment Reviewer Guidance – Building Hot & Cold Water Systems
Reference: HSE Control of Legionella Bacteria in Water Systems: Audit Checklists C200

Operation & Maintenance	Reviewer notes
Are low use outlets flushed at least weekly and records kept in the Written Scheme logbook?	Flushing records were seen recorded in a separate folder at the time of this 2017 review.
What are the procedures for bringing stand-by equipment into service?	No standby equipment.
If TMV's are fitted, are they being maintained on a 6 monthly basis and records kept in the system logbook?	TMVs are being serviced and maintained on a six monthly basis; this was last carried out in February 2017.
Are CWST's inspected at least annually to include a check that there is cross flow of water and records kept in the system logbook?	N/A
Are calorifier drains checked on a monthly basis for operation and drained water conditions checked and records kept in the system logbook?	No records of calorifier drain purging seen.
How is calorifier internal condition assessed and what is the periodicity of internal inspection?	No records seen Refer to School / Southampton City Council.
Have outlets that are no longer required been cut back to the nearest main pipe branch?	Deadleg pipe work was still seen to be in place which was highlighted in the previous review.
Are up-to-date O&M manuals for the water system plant held including system valve lists, and pre-start, running, and stopping check off lists?	No records seen.
Are showers & other outlets being cleaned at least quarterly and records kept in the system logbook?	The shower no longer has a showerhead as it has been removed; the shower is no longer used but is flushed weekly.



Legionella Risk Assessment Reviewer Guidance – Building Hot & Cold Water Systems
Reference: HSE Control of Legionella Bacteria in Water Systems: Audit Checklists C200

Monitoring	Reviewer notes
Do system users carry out daily temperature monitoring checks and place records in the system logbook?	No
Are the temperatures of sentinel hot & cold-water outlets checked on a monthly basis and records kept in the system logbook?	Yes temperatures are recorded within the logbook documentation.
Are the hot & cold-water temperatures from all other water system outlets checked on an annual basis and records kept in the system logbook?	Additional outlets checked.
Is the temperature of the hot water supply to TMV's checked on a monthly basis and records kept in the system logbook?	No records of temperature monitoring of the TMVs was seen within the logbook documentation at the time of this review.
Are calorifier flow & return temperatures checked on a monthly basis and records kept in the system logbook?	No records of temperature monitoring of the calorifier flow and return was seen within the logbook documentation at the time of this 2017 review.
Are calorifier temperatures checked at the base mid-level and top to check for primary heating efficiency and records kept in the system logbook?	Refer to Contractors carrying out monitoring.
Are CWST inlet & outlet temperatures checked on a 6 monthly basis and records kept in the system logbook?	N/A