



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

Moorlands Primary School
Risk Assessment Review
20th November 2018



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Property Name & Description: Moorlands Primary School			Review Date: 20th November 2018
Responsible Person(s) Name & SCC Appointment: Mrs C, Potter (Responsible Person) Mr A. Venn (Deputy)			Last Review: 5th December 2016
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	Responsible person and deputy have been nominated in writing and recorded in the logbook.
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	



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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?		NO	Drawings have been updated at the time of this 2018 review. Original risk assessment was not seen at the time of this 2018 review.
Does the Risk Assessment include the measures & precautions to be taken to control foreseeable risks?		NO	Original risk assessment was not seen at the time of this 2018 review.
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?	YES		
Are the records of water system temperature monitoring & flushing representative of control measures, & up-to-date?	YES		Temperature monitoring is up to date as of November 2018 Flushing is carried out weekly and recorded in the weekly compliance checks folder.
Property & System Changes			
Have changes to property occupancy resulted in fewer occupants, intermittent occupation, or partial closure?		NO	
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		TMVs fitted.
Are there any other aspects of the water system including its design, operation & maintenance that have increased foreseeable risks?	YES		No record of showerhead inspections, cleaning being carried out.



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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>Ensure the deputy person is nominated and recorded within section 2 of the logbook documentation. Locate the original risk assessment for the school and Oak building risk assessment and file in the logbook documentation. High</p> <p>The responsible person and deputy have now been recorded; the original risk assessments are not seen filed in the logbook documentation. High</p>		
<p>Remove deadleg pipe work. High</p> <p>The deadleg pipe work has now been removed. Low</p>		
<p>Start cleaning and descaling the ladies staff area showerhead at least on a quarterly basis or at the rate of fouling and record in the logbook when carried out. High</p> <p>No records were seen to indicate this is being carried out. High</p>		
<p>Continue to flush all infrequently used outlets weekly and record when carried out. Continue during shut down periods and school holidays. Medium</p> <p>Weekly flushing is being carried out and recorded. Medium</p>		
<p>Clean all inline strainers where fitted on a regular basis or as part of a maintenance schedule. Medium</p> <p>No records were seen to indicate this is being carried out, Medium</p>		



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Risk Now (Circle)	Insignificant	Low	Medium	High	Uncertain

Remedial action to be taken	By Whom	By When
Maintain and service TMVs (blender valves) as recommended by the manufacturers. Medium No records were seen to indicate this is being carried out, Medium		
Audit logbook at least on an annual basis. Medium The logbook does not appear to have been audited since October 2012. Medium		



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Compliance & Control Checks	Reviewer notes
Have responsible person(s) considered whether foreseeable risks could be eliminated?	Refer to Southampton City Council.
Have the responsible person(s) & deputies been nominated in writing?	Responsible person and deputy have now been nominated in writing within the 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 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 Southampton City Council.
Do responsible person(s) keep a log of water system defects and follow up on progress?	All system defects are assumed phoned through to Southampton Property Services.
Do the responsible person(s) have a budget for remedial works and are they aware of the programme for completion?	Refer to Southampton City Council.



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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?	The schools original risk assessment and Oak building risk assessment carried out in 2015 were not seen at the time of this 2018 review.
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 2018 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 Southampton City Council.
How are remedial works co-ordinated, funded and approved including programme priorities?	Refer to Southampton City Council.



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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?	Pipe work appeared to be mainly copper throughout the school. New copper pipe work has been installed running external to Acorn building on the roof.
Do any of the materials used in pipe systems & fittings support bacterial growth or corrosion?	If any galvanised metal is still on system this will harbour corrosion.
If TMV's are fitted are they sited within 2m of the outlet(s) served?	All TMVs seen appear to be within 2 metres of the outlets.
Cold Water System	
Have low use outlets been installed upstream of high use outlets?	Flushing is being carried out weekly on infrequently used outlets.
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 runs within the ceiling voids; I was unable to access these areas. Pipe work running on the roof of the school building was well insulated. Oak building pipe work is well insulated.
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



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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?	2 x Hamworthy gas fired calorifiers are both capable of maintaining temperatures.
Are multiple calorifiers connected in parallel?	Yes x 2
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? 	Both Calorifiers Yes Flow pipe work only Yes No Yes
Do electrically heated hot water heaters deliver water instantaneously at 50°C or above?	Refer to contractors temperature 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?	Hot water warning labels are fitted.



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Operation & Maintenance	Reviewer notes
Are low use outlets flushed at least weekly and records kept in the Written Scheme logbook?	Flushing is carried out and recorded in the weekly compliance checks folder.
What are the procedures for bringing stand-by equipment into service?	N/A
If TMV's are fitted, are they being maintained on a 6 monthly basis and records kept in the system logbook?	No records were seen for maintenance being carried out at the time of this 2018 review.
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 documented.
How is calorifier internal condition assessed and what is the periodicity of internal inspection?	Refer to Southampton City Council.
Have outlets that are no longer required been cut back to the nearest main pipe branch?	N/A
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?	No records were seen at the time of this 2018 review to indicate the showerhead is being inspected, cleaned and descaled at least on a quarterly basis by the contractor carrying out Legionella control monitoring for the school.



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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 this was seen 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?	Yes additional outlets are being checked monthly.
Is the temperature of the hot water supply to TMV's checked on a monthly basis and records kept in the system logbook?	Yes records of temperature monitoring of the TMVs was seen within the logbook documentation.
Are calorifier flow & return temperatures checked on a monthly basis and records kept in the system logbook?	Yes records of the hot water calorifier flow and return temperatures were seen recorded in the logbook documentation.
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