



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

Bitterne Manor Primary School

Risk Assessment Review

19th January 2017



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Property Name & Description: Bitterne Manor Primary School			Review Date: 19th January 2017
Responsible Person(s) Name & SCC Appointment: Suzanne Howard (Head) Mr Dave Puckett (Site Manager)			Last Review: 23rd January 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	Responsible persons and deputies are nominated in writing within the logbook. No responsibilities were seen in the logbook documentation this includes contractors.
Have the persons nominated to carry out control measures including responsible person(s) received appropriate training?		NOT KNOWN	Contractors Aquadition carry out the monitoring control measures. Unknown if training has been undertaken.
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?	YES		Drawings were updated at the time of this 2017 review.
Does the Risk Assessment include the measures & precautions to be taken to control foreseeable risks?	YES		
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 December 2016.
Property & System Changes			
Have changes to property occupancy resulted in fewer occupants, intermittent occupation, or partial closure?		NO	School assumed 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		Disabled toilet area outlets not being used but are flushed on a weekly basis.
Are there any other aspects of the water system including its design, operation & maintenance that have increased foreseeable risks?	YES		Far end boys toilet water heater not working correctly at the time of this 2017 review.



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Risk Was (Circle)	Insignificant	Low	Medium	High	Uncertain
Remedial action to be taken			By Whom	By When	
Continue to carry out monthly temperature monitoring and record in logbook. Medium Monthly legionella control monitoring is being carried out by contractors Aquadition. Medium					
Clean and disinfect showerheads quarterly and record. Medium No records were seen to indicate this is being carried out; site manager informed and will now carry this out. Medium					
Continue to flush all infrequently used outlets weekly and record when carried out. Continue during shut down periods and school holidays. Medium This is being carried out by the site manager and recorded in a separate logbook. Medium					
Clean any inline strainers on a regular basis or as part of a maintenance schedule. Medium No records seen for this at the time of this review. Medium					
Maintain and service TMVs (blender valves) as recommended by the manufacturers. Medium No records seen to indicate this is being carried out. Medium					



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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>Repair or replace the faulty electric local water heater within the Year 5/6 Boys Toilets. This should be carried out as soon as is practicable. High This water has been replaced with a new one. Low</p>		
<p>Repair or replace the faulty TMV that supplies the Pre-School Toilets. This should be carried out as soon as is practicable. High This area has been refurbished with new outlets and TMVs. Low</p>		
<p>Remove all dead legs or put on a weekly flushing regime (without creating an aerosol) and record within the logbook when carried out. This should commence as soon as is practicable. High The deadleg pipe work highlighted has been deemed not live pipe work; this is capped off and has not been removed. Low</p>		
<p>Audit logbook at least on an annual basis and record when carried out. Medium No records seen for logbook audits since May 2014. Medium</p>		



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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 deputies have been nominated in writing.
Are responsible person(s)/deputies contact details available in the event of an emergency?	No contact details for 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 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 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?	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: <ul style="list-style-type: none"> ●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 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 copper.
Do any of the materials used in pipe systems & fittings support bacterial growth or corrosion?	None Seen.
If TMV's are fitted are they sited within 2m of the outlet(s) served?	TMVs are fitted in the school; all appear to be within 2 metres of 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 and during school holidays and shut down periods by the site manager.
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; pipe work seen was not 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?	1 x calorifier is capable of maintaining temperatures.
Are multiple calorifiers connected in parallel?	No
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? 	Boiler Room Calorifier Yes Fitted on flow pipe work only Not seen No Yes boiler room only.
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 in some areas.



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Operation & Maintenance	Reviewer notes
Are low use outlets flushed at least weekly and records kept in the Written Scheme logbook?	Infrequently used shower is flushed weekly and recorded in site managers book.
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 seen for maintenance and servicing of TMVs.
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?	Refer to Southampton City Council.
Have outlets that are no longer required been cut back to the nearest main pipe branch?	No more outlets appear to have been removed.
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?	There are no records to indicate the showerhead is being inspected / cleaned at least on a quarterly basis; I was informed the site manager will now take on this task.



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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?	Additional outlets are 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 boiler room calorifier hot water flow and return temperatures are being recorded within 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