



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

Weston Shore Infants School

Risk Assessment Review

6th August 2018



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Property Name & Description: Weston Shore Infants School			Review Date 6th August 2018
Responsible Person(s) Name & SCC Appointment: Fiona Mackle (Head Teacher) Mrs Kate Hilton (Site Manager)			Last Review: 23rd August 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 were seen nominated in writing within section 2 of 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	

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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 filed within the logbook documentation.
Does the Risk Assessment include the measures & precautions to be taken to control foreseeable risks?		NO	Original risk assessment was not seen filed within the logbook documentation.
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?		NO	
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 July 2018; records seen for flushing of infrequently used outlets and shower up to date as July 2018.
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 are fitted.
Are there any other aspects of the water system including its design, operation & maintenance that have increased foreseeable risks?	YES		Elevated cold water storage tank temperature. Hot water at far side of school takes up to 5 minutes to achieve any hot water but only up to 35.0C Investigate both hot water return pumps for correct operation. Calorifier storage temperatures low



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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
Located original risk assessment and file within the logbook documentation. High This has not been carried out. High		
Investigate hot water system for correct operation to achieve 50.0°C at outlets or TMVs at the far areas of the school. High Both hot water return pumps were switched off and calorifier storage temperatures were both low. High		
Investigate the cold return pipe work on pump No.1 valve 29; this could be the possible cause for lack of hot water reaching the far outlets within the school. High Both calorifier return pumps were switched off at the time of this 2018 review. High		
Continue to clean and disinfect showerhead at least on a quarterly basis or at the rate of fouling. Medium The showerhead is being cleaned and descaled on a quarterly basis. Medium		
Continue to flush all infrequently used outlets weekly and record when carried out. Continue during shut down periods and school holidays. Medium Flushing is being carried out and up to date as of July 2018. 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
Continue to clean and disinfect cold water storage tank and continue annually if required. Medium The water storage tank has not e cleaned and disinfected since April 2017. Medium		
Consider additional insulation to cold water storage tank as elevated water temperature was again recorded at the time of this 2016 review. Medium No additional insulation has been fitted. Medium		
Maintain and service TMVs fitted within the school 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; consider archiving old record sheets to enable better access into logbook. Medium The log book was last audited in October 2017. 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 been nominated in writing.
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 City Council 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 original risk assessment was 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?	Visual pipe work appeared to be copper.
Do any of the materials used in pipe systems & fittings support bacterial growth or corrosion?	Main pipe runs are hidden from view as they are mainly behind panelling or beneath the floor; all visual pipe work appeared to be copper.
If TMV's are fitted are they sited within 2m of the outlet(s) served?	All appeared to be within 2 metres of the outlets.
Cold Water System	
Have low use outlets been installed upstream of high use outlets?	Flushing of infrequently used outlets is being carried out and recorded weekly.
Has cold water storage volumes been assessed for turnover (ideally 12 hours) & stagnation risk?	Only one water storage tank is now in use.
Is cold & hot water pipe work kept separated and adequately insulated?	Most pipe work is hidden from visual inspection; no insulation seen.
Are cold water tanks fitted with covers & insect screens, located in a cool well-insulated space, & safely accessible?	Tank is located above the plant room; again elevated cold water temperature at time of this 2018 review consider additional insulation to storage tank.
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 Hot water calorifiers appear capable of maintaining water temperatures at peak times; both were found to have low storage temperatures at the time of this 2018 review and both return pumps were switched off..
Are multiple calorifiers connected in parallel?	Both Calorifiers are linked in parallel.
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? 	Yes Temperature gauges fitted on one flow No access panels seen No Good pipe work insulation in boiler room area.
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?	Yes stand pipe outlets and shower are being flushed weekly.
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 the servicing and maintenance 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?	No cross flow of water in storage tank; no inspection records seen.
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 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?	Last clean and disinfection was seen recorded as July 2018.



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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 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 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?	Not records were seen for this recorded within the logbook documentation.