



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

**Mount Pleasant Junior School**

**Risk Assessment Review**

**15<sup>th</sup> October 2018**



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<b>Property Name &amp; Description: Mount Pleasant Junior School</b>			<b>Review Date:15<sup>th</sup> October 2018</b>
<b>Responsible Person(s) Name &amp; SCC Appointment: Rob Griffiths (Responsible Person) Mr Dean Haines (Deputy)</b>			<b>Last Review: 3<sup>rd</sup> November 2016</b>
<b>Compliance &amp; Control Measure Checks</b>	<b>Yes</b>	<b>No</b>	<b>Comments/Observations</b>
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 have been 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	



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<b>Risk Assessment, Written Scheme &amp; Property/System Change Checks</b>			
<b>Risk Assessment</b>	<b>Yes</b>	<b>No</b>	<b>Comments/Observations</b>
Does the Risk Assessment identify foreseeable risks & include an up to date schematic of the water systems?		NO	Drawings were updated at the time of this 2018 review. The 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	The original risk assessment was not seen filed within the logbook documentation.
<b>Written Scheme</b>			
Are inspection & maintenance measures identified in the Risk Assessment being carried out?	YES		
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 October 2018.
<b>Property &amp; System Changes</b>			
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		TMVs fitted. Deadleg Pipe work seen
Are there any other aspects of the water system including its design, operation & maintenance that have increased foreseeable risks?	YES		Combination boiler serving year 5 toilets did not achieve 50.0C at the TMVs within one minute.



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<b>Risk Was (Circle)</b>	Insignificant	Low	Medium	High	Uncertain
<b>Risk Now (Circle)</b>	Insignificant	Low	Medium	High	Uncertain

<b>Remedial action to be taken</b>	<b>By Whom</b>	<b>By When</b>
Locate original risk assessment and file in logbook documentation. High The original risk assessment for the school was not seen. High		
Investigate the TMVs with year 5 toilet areas for correct operation as elevated hot water above 50.0c was passing at the outlets at the time of this review; adjust and service or remove if not required. High These appeared to be working satisfactory but the hot water supply to the TMV was low and should be investigated. High		
Ensure the new shower showerhead in the gents toilet area is cleaned and descaled at least on a quarterly basis; and recorded in the logbook documentation when carried out. Medium This was last carried out in July 2018 but no records seen for April 2018. Medium		
Start weekly flushing of all infrequently used outlets; and record in logbook when carried out. Medium No flushing is being carried out. Medium		
Carry out routine service of kitchen water softener on an annual basis. Medium No records seen to indicate this is being carried out. Medium		
Continue to audit logbook at least on an annual basis. Medium The logbook has not been audited since January 2016. Medium		



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<b>Compliance &amp; Control Checks</b>	<b>Reviewer notes</b>
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?	Yes responsible person and deputies 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.
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 filed within the logbook documentation.
Does the water system schematic show and identify all equipment & outlets including water softeners, TMV's, pumps, principal valves, standby 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: <ul style="list-style-type: none"> <li>•System operating instructions?</li> <li>•Precautions to be taken when operating the system?</li> <li>•Details of the monitoring checks to be carried out on the system?</li> </ul>	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?	Visual pipe work appeared to be copper.
Do any of the materials used in pipe systems & fittings support bacterial growth or corrosion?	Galvanised metal will harbour corrosion which could act as a nutrient if still on system.
If TMV's are fitted are they sited within 2m of the outlet(s) served?	All TMVs where seen appear to be within 2 metres.
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 on main runs appeared to be well insulated. Mains pipe work does run with heating pipe work and in front of radiators in most classroom areas; insulation has been fitted on this pipe work.
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
<b>Hot Water Systems</b>	
Is Calorifier storage capacity capable of maintaining a DHW distribution temperature of at least 50°C during maximum demand periods?	Main boiler room calorifier is capable.
Are multiple calorifiers connected in parallel?	No
Is the calorifier(s) fitted with the following: <ul style="list-style-type: none"> <li>•Functioning drain valve?</li> <li>•Temperature gauges on the flow &amp; return?</li> <li>•An access panel?</li> <li>•A shunt pump and timer, timed to heat the calorifier to over 60°C for at least an hour a day?</li> <li>•Adequate primary &amp; secondary pipe work insulation?</li> </ul>	Yes Temperature gauge only fitted on flow pipe work on boiler room calorifier No Yes on boiler room calorifier Missing on boiler room flow pipe work in some areas.
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?	No Hot water 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?	Records were not seen for weekly flushing of infrequently used outlets.
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 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?	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 Southampton City Council.
Have outlets that are no longer required been cut back to the nearest main pipe branch?	No; deadleg pipe work was seen
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 showerhead was last cleaned in July 2018 but no April 2018 record was seen.



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<b>Monitoring</b>	<b>Reviewer notes</b>
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 in 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 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 the 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