



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

Shirley Warren Primary School

Risk Assessment Review

4th January 2017



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Property Name & Description Shirley Warren Primary School			Review Date: 4th January 2017
Responsible Person(s) Name & SCC Appointment: Alison Mann (Head) Mr Rob Kelly (Site Manager)			Last Review: 5th 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?	YES		Responsible persons and deputies have been nominated in writing and recorded 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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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. <u>Original risk assessment not seen filed in the logbook documentation.</u>
Does the Risk Assessment include the measures & precautions to be taken to control foreseeable risks?		NO	<u>Original risk assessment not seen at the time of this 2017 review.</u>
Written Scheme			
Are inspection & maintenance measures identified in the Risk Assessment being carried out?	YES		Temperature Monitoring is being carried out. <u>Original risk assessment not seen filed in the logbook documentation.</u>
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 December 2016; flushing is carried out and recorded in a separate logbook b the site manager.
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. Deadleg pipe
Are there any other aspects of the water system including its design, operation & maintenance that have increased foreseeable risks?	YES		Chestnut wing water heater thermostat require investigation for correct operation as very low temperature recorded.



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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
Remove deadleg pipe work High The deadleg pipe work highlighted was still seen in place. High		
Ensure water heaters with greater than 15 litres capacity store hot water at 60.0c. High The chestnut wing water heater serving the shower and toilet area was found to have very low storage and should be investigated. High		
Ensure main kitchen heater and parent suite staff toilet combination boiler are adjusted to achieve 50.0c at the outlets. High These were both found to be satisfactory at the time of this 2017 review. Medium		
Ensure shower is used on a regular basis and shower head is cleaned and descaled at least on a quarterly basis. Medium This is being carried out quarterly; last carried out in October 2016. Medium		
Flush all infrequently used outlets weekly and record when carried out. Continue during shut down periods and school holidays. Medium I was informed by the site manager that flushing is carried out and recorded in a separate logbook. 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
Maintain and service TMVs (blender valves) as per manufacturer’s recommendations. Medium No records were seen to indicate this is being carried out at the time of this 2017 review. Medium		
Audit logbooks at least on an annual basis. Medium This has not been carried out since January 2014. 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 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 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?	<u>Original risk assessment not seen filed in the logbook documentation.</u>
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?	Remedial / modification report for 2014 was seen filed 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 visible.
If TMV's are fitted are they sited within 2m of the outlet(s) served?	TMVs fitted appear to be within 2 metres of the 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; Main pipe run appears to be insulated in corridor ceiling void.
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?	Hot water in the school is from local water heaters and a combination boiler. Chestnut wing shower / toilet area water heater very low temperature and needs investigating.
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? 	N/A
Do electrically heated hot water heaters deliver water instantaneously at 50°C or above?	Contractors temperature monitoring records indicate temperatures are normally satisfactory.
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.



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Operation & Maintenance	Reviewer notes
Are low use outlets flushed at least weekly and records kept in the Written Scheme logbook?	I was informed by the site manager that flushing is carried out and recorded in a separate logbook.
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 adjustment of TMVs at the time of this 2017 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?	N/A
How is calorifier internal condition assessed and what is the periodicity of internal inspection?	N/A
Have outlets that are no longer required been cut back to the nearest main pipe branch?	Deadleg pipe work seen in chestnut wing water heater pipe work; recommend removal.
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?	Records indicate the shower in chestnut wing toilet area was last carried out in October 2016.



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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 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 recorded within the logbook documentation.
Are calorifier flow & return temperatures checked on a monthly basis and records kept in the system logbook?	N/A
Are calorifier temperatures checked at the base mid-level and top to check for primary heating efficiency and records kept in the system logbook?	N/A
Are CWST inlet & outlet temperatures checked on a 6 monthly basis and records kept in the system logbook?	N/A.