



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

Sea City Museum
Risk Assessment Review
14th April 2014



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Property Name & Description Sea City Museum			Review Date: 14 th April 2014
Responsible Person(s) Name & SCC Appointment: Rob Pope			Last Review: N/A
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	<u>Responsible persons and deputy have not been nominated in writing and recorded within the logbook documentation.</u>
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 have been updated at the time of this review 2014.
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		
Have remedial works identified in the Risk Assessment & subsequent reviews to minimise foreseeable risks been completed?	YES		Future pipe work deadlegs have been removed from water systems.
Are the records of water system temperature monitoring & flushing representative of control measures, & up-to-date?	YES		Monitoring and flushing is up to date as of April 2014.
Property & System Changes			
Have changes to property occupancy resulted in fewer occupants, intermittent occupation, or partial closure?		NO	It is assumed the occupancy is variable.
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		Assumed some infrequently used outlets but flushing is carried out three times a week.
Are there any other aspects of the water system including its design, operation & maintenance that have increased foreseeable risks?	YES		TMV in first floor learning room 2 is faulty and needs addressing. Elevated cold water at some outlets possibly due to early morning but flushing is carried out three times a week.



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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
A Legionella control regime must be put in place at the earliest opportunity; duty holder, responsible person and operational staff should be nominated in writing along with all contact details. High This has been put in place but the responsible person and deputy have not been nominated in writing in the logbook. High		
A water systems logbook should be put in place at the earliest opportunity along with written scheme and all procedures to be carried out. High This has now been put in place. Medium		
Start monthly temperature monitoring of sentinel outlets and some additional outlets on a monthly basis and record in water systems logbook. High This is now being carried out. Medium		
Start monthly temperature monitoring of the hot water calorifier flow and return temperatures and record in water systems logbook. High This is now being carried out. Medium		
Remove any deadleg pipe work. High Future deadleg pipe work has now been removed. Medium		



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Risk Now (Circle)	Insignificant	Low	Medium	High	Uncertain

Remedial action to be taken	By Whom	By When
Clean and disinfect cold water storage tank annually if required. Medium This is now being carried out; last carried out in January 2014. Medium		
Ensure cold water booster set pumps are sequenced to run to prevent deadleg areas. Medium It is assumed this has been set up. Medium		
Ensure kitchen pot wash spray head is frequently used and cleaned and descaled at least quarterly or as required; record in logbook when carried out. Medium No record of this spray head being cleaned and descaled. Medium		
All TMV Blender taps should be serviced and maintained to manufacturer’s recommendations. Medium No records seen for servicing and maintenance being carried out. Medium		



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Risk Now (Circle)	Insignificant	Low	Medium	High	Uncertain

<p>It should be ensured that if humidifier systems are not being used for a prolonged period that the systems should be drained of all water to prevent stagnation occurring. The systems should be cleaned and disinfected including condensate trays as recommended by the manufacturer and before bringing back into service. Medium It is assumed these systems are serviced and maintained; this should continue. Medium</p>		
<p>Ensure reverse osmosis unit is serviced to maintain a good quality water for the two humidifiers. Medium It is assumed these systems are serviced and maintained; this should continue. 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?	<u>Responsible person and deputy have not been nominated in the logbook documentation.</u>
Are responsible person(s)/deputies contact details available in the event of an emergency?	<u>No responsible person or deputies contact details seen in logbook.</u>
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 found in writing no logbook in place.
Have they all received appropriate training?	No training records were found 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?	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 review 2014.
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 changes to the water system have been recorded in the water systems logbook.
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 within the building.
Do any of the materials used in pipe systems & fittings support bacterial growth or corrosion?	No
If TMV's are fitted are they sited within 2m of the outlet(s) served?	All TMVs appear to be within 2m of the outlets.
Cold Water System	
Have low use outlets been installed upstream of high use outlets?	Flushing should be carried out weekly on any infrequently used outlets.
Has cold water storage volumes been assessed for turnover (ideally 12 hours) & stagnation risk?	Refer to Southampton City Council.
Is cold & hot water pipe work kept separated and adequately insulated?	Pipe work well insulated within the building.
Are cold water tanks fitted with covers & insect screens, located in a cool well-insulated space, & safely accessible?	Yes located in the boiler room.
Are multiple CWST's configured in duty/stand-by mode and not operated in parallel?	No



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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?	Yes appears capable of maintaining good 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?	Yes Yes Not Seen No Good insulation fitted
Do electrically heated hot water heaters deliver water instantaneously at 50°C or above?	No water heaters fitted.
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?	Records seen at the time of this review indicated flushing is carried three times a week and was up to date as of 11 th April 2014.
What are the procedures for bringing stand-by equipment into service?	No standby equipment.
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 service and maintenance of TMVs at the time of this 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?	Inspected annually at time of clean and disinfection.
Are calorifier drains checked on a monthly basis for operation and drained water conditions checked and records kept in the system logbook?	No records seen.
How is calorifier internal condition assessed and what is the periodicity of internal inspection?	No records seen.
Have outlets that are no longer required been cut back to the nearest main pipe branch?	No outlets 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?	Seen in plant room areas.
Are showers & other outlets being cleaned at least quarterly and records kept in the system logbook?	<u>No showers fitted within museum although no record of pot wash spray head being cleaned and descaled..</u>



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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?	Yes seen recorded within the logbook documentation.
Is the temperature of the hot water supply to TMV's checked on a monthly basis and records kept in the system logbook?	Yes seen recorded within the logbook documentation.
Are calorifier flow & return temperatures checked on a monthly basis and records kept in the system logbook?	Yes seen 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?	No records seen for this being carried out.