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INTRODUCTION

Client Address	Hampshire County Council PBRS Three Minsters House 76 High Street Winchester Hampshire SO23 8UL
Site Name	Westholme OPH
Site Address	55 Harestock Road Winchester Hampshire SO22 6NT
Site contact	Christine Chirimumimba
Site telephone number	01962 881481
Last risk assessment carried out by	Freeston Water Treatment Limited
Date of risk assessment	June 2011
Date of previous review	10th April 2012
Date of new review	12th March 2014
Review carried out by	Mr Chris Wilson

This Review has been carried out in accordance with ACoP L8 'The control of Legionella bacteria in water systems' (APPROVED CODE OF PRACTICE & GUIDANCE) and BS 8580 (RISK ASSESSMENTS FOR LEGIONELLA CONTROL-CODE OF PRACTICE).

REVIEW COMPLIANCE

The Review was commissioned in order to identify and assess the risk of Legionellosis from the water sources on the premises using the previous Risk Assessment. General and specific observations on the systems made during the course of the Survey are also recorded and the more general requirements of L8 are also commented on where applicable.

The specific observations made in this Review, together with the most recent Risk Assessment should be read in conjunction with the practices and procedures detailed in the recommendations section and also with ACoP L8.

The Assessment should be reviewed regularly (at least every two years) and whenever there is reason to suspect it is no longer valid. An indication of when to review the Assessment and what needs to be reviewed should be recorded.

This may result from example:

Changes to the water system or its use.

Changes to the use of the building in which the water system is installed.

The availability of new information about risks or control measures.

The results of checks indicating that control measures are no longer effective.

A case of Legionnaires disease/Legionellosis is associated with the system.

SITE REVIEW

This Review relates to observations made and information supplied from the existing Risk Assessment Review together with information supplied by others.

LOG BOOK

Is there a copy of the last Risk Assessment carried out on the domestic water system?	Yes	A copy of the original Risk Assessment and the last Review was seen filed within the Managers Office.
Is there a domestic water systems logbook in place?	Yes	A water systems log book is in place and was being used at the time of this Review; this was located within the Managers Office.
Are the management structure duty holder, responsible person and deputies nominated in writing?	Yes	The Duty Holder and Responsible person have been nominated in writing but no Deputy Responsible Persons have been nominated.
Are contact details written in writing within the logbook documentation?	Yes	The contact details for the Duty Holder and Responsible person was seen written within the logbook documentation.

MONITORING

Is hot water temperature monitoring being carried out on a monthly basis and results recorded within the logbook documentation?	Yes	Monthly temperature monitoring of the domestic hot water system is being carried out and recorded in the relevant section of the logbook.
Is cold water temperature monitoring being carried out on a monthly basis and results recorded within the logbook documentation?	Yes	Monthly temperature monitoring of the domestic cold water system is being carried out and recorded in the relevant section of the logbook.
Are hot water calorifier flow temperatures being taken and results recorded within the logbook documentation?	Yes	Monthly temperature monitoring of the hot water calorifier flow is being carried out and recorded in the relevant section of the logbook.
Are hot water calorifier return temperatures being taken and results recorded within the logbook documentation?	Yes	Monthly temperature monitoring of the hot water calorifier return is being carried out and recorded in the relevant section of the logbook.
Are monitoring records recorded within the logbook documentation up to date?	Partially	Monitoring was partially up to date at the time of this Review.
Is weekly flushing of infrequently used outlets being carried out and recorded within the logbook documentation?	Partially	<p>There is an area which is currently under the responsibility of an outside contractor due to an extension being constructed. Weekly flushing of the outlets within this area is the sole responsibility of the contractors but it is not known if this is being carried out; it is not being recorded within the logbook.</p> <p>It should be ensured that all infrequently used outlets are flushed through at least on a weekly basis; record in logbook documentation when carried out.</p>

COLD WATER STORAGE

Have cold water storage tanks where fitted been cleaned and disinfected annually?	No	The cold water storage tanks are not being cleaned and disinfected annually if required.
Have storage tank cleaning and disinfection certification been filed within the logbook documentation?	No	No storage tank cleaning and disinfection certification was seen within the logbook documentation.
Storage tank cleaning and disinfection was last carried out on?		Unknown
Are water storage tanks being inspected on a six monthly basis and temperatures recorded within the logbook documentation when carried out?	No	The cold water storage tanks should be inspected on a six monthly basis and temperatures from the tanks and remote from the ball valves be recorded within the logbook documentation.

SHOWERS

Are showerheads being cleaned and descaled on a quarterly basis or as required?	Yes	All showerheads and hoses are being inspected / cleaned and descaled at least quarterly or as required.
Is it being recorded within the logbook documentation when showerheads are cleaned and descaled?	Yes	Showerheads are being inspected /cleaned and descaled and documented within the logbook documentation when carried out.
Is showerhead cleaning and descaling up to date?	Yes	Showerhead inspection / cleaning and descaling were up to date at the time of this Review.

DRAWINGS

<p>Are schematic drawings up to date with any changes made to the domestic water systems?</p>	<p>Yes</p>	<p>Schematic diagrams are filed within the Risk Assessment. It is thought that no changes have been made to the systems.</p>
<p>Are schematic drawings suitable and show all relevant storage and system details?</p>	<p>Yes</p>	<p>Schematic diagrams were seen to show relevant storage areas and system details. Copies should be filed within the logbook documentation.</p>

TMV's

<p>Are TMV's where fitted being serviced and maintained?</p>	<p>Yes</p>	<p>TMV's should be serviced and maintained as directed by the manufacturers.</p>
<p>Is documentation available to indicate when TMV's were last serviced / maintained?</p>	<p>No</p>	<p>TMV's should be serviced and maintained as directed by the manufacturers; and recorded within the logbook documentation when carried out. I was informed that this was carried out by outside contractors but no records or documentation were seen within the logbook.</p>

SAMPLING

<p>Has any Legionella or bacteriological water sampling been carried out on the domestic water systems?</p>	<p>No</p>	<p>Legionella water sampling should be carried out on the domestic water systems if the relevant water temperatures as recommended in the ACoP L8 and BS8580 are not constantly maintained. No records of sampling being carried out were seen within the logbook.</p>
<p>Have Legionella or bacteriological water sampling test results if taken been filed within the logbook documentation?</p>	<p>No</p>	<p>No records of sampling being carried out were seen within the logbook.</p>

REMEDIAL WORKS

<p>Has any remedial works identified within previous Risk Assessments / Reviews been carried out?</p>	<p>Yes</p>	<p>Remedial works highlighted within the Risk Assessment Review have been carried out in some areas.</p>
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ANCILLARY EQUIPMENT

<p>Is there any ancillary equipment on site?</p>	<p>Yes</p>	<p>Sluice Rooms - Inline scale reducers on the cold water pipe to the pot wash machines.</p> <p>Main Kitchen - Water softener for the dishwasher</p>
<p>Is ancillary equipment being serviced and maintained to the manufacturer's recommendations?</p>	<p>No</p>	<p>Sluice Rooms - Inline scale reducers. It is unknown if these have been cleaned / replaced. I would recommend that the manufacturer is contacted for maintenance recommendations.</p> <p>Main Kitchen - Water Softener for the dishwasher. This may require servicing and disinfecting; this has not been carried out. I would recommend that the manufacturer is contacted for maintenance recommendations.</p>

HOT WATER STORAGE

Hot water storage at Westholme - OPH is by one calorifier located within the Boiler Room. The unit was manufactured by ACV and is supplied by the domestic cold water storage tank within the roof space of the long wing.

The calorifier has insulation under the factory fitted metal outer casing, is of a steel construction and is indirectly heated by an internal coil from the heating boilers.

There is a return system fitted to the calorifier which has one circulation pump on the return pipe. At the time of the survey the pump appeared to be working correctly.

I would recommend that calorifiers be purged to drain to check the water quality on at least an annual basis and recorded within a water systems logbook when carried out. I was informed that this is not being carried out.

ACoP L8 recommends that calorifiers are checked internally for scale and sludge on an annual basis. I was informed that this is not being carried out.

There is a temperature gauge at height on the return pipework but not on the flow pipe and I would recommend that one be fitted.

ACoP L8 recommends hot water storage to be a minimum of **60°C** and the return to be maintained at a minimum of **50°C** at all times.

The temperature of the water at the time of the Survey was:-

Calorifier	Storage	60.2°C	Satisfactory
Calorifier	Return	52.3°C	Satisfactory

COLD WATER STORAGE

Domestic cold water storage at Westholme OPH consists of one domestic cold water storage tank located within the roof space of the long wing. There is also a water storage tank for the fire sprinkler system of both Westholme OPH and NCU located outside. As this a 'closed system' it does not pose a legionella risk in normal operation and is therefore not covered by this survey.

It is thought that the domestic cold water storage tank supplies the calorifier via a two pump booster set only. The booster pumps switch automatically ensuring that neither pump becomes a dead leg.

The domestic cold water storage tank is of a GRP, sectional construction. There is a screened vent on the lid and a screen on the overflow pipe and overflow warning pipe. This vessel has integral insulation to the body, lid and but not on the access hatch and I would recommend that this be insulated if water temperature becomes elevated to near 20°C in the hotter months.

There is a good cross flow of water through the tank as the outlet and inlet pipes are at opposing ends of the vessel.

The inside of the tank showed a light deposit of sediment on the base and a light amount of biofilm on the sides. Sediment and biofilm act as nutrients and an ideal environment for the proliferation of bacteria including legionella. It is unknown when the vessel was last cleaned and disinfected and I would recommend that this be carried out within the near future.

The cold water storage temperature of the tank was:-

10.6°C Satisfactory

COLD WATER STORAGE TANK PHOTOGRAPHS

An internal view of the domestic cold water storage tank.



ADDITIONAL PHOTOGRAPHS

DL1 Boiler Room

There is a dead leg on the mains cold water rising main pipe.



DL2 Boiler Room

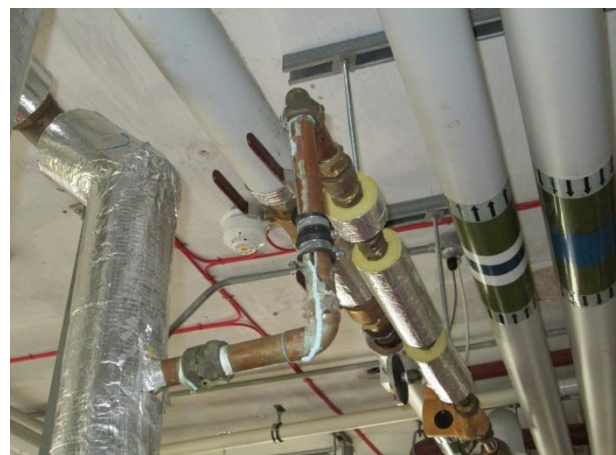
There is a new dead leg on the hot flow pipe of the calorifier.



Boiler Room

Uninsulated hot return pipework.

NOTE - The rubber joint that should be of a WRAS approved material.



SELECTED HOT & COLD WATER TEMPERATURES TAKEN AT REVIEW

Domestic water services should operate at temperatures that prevent the proliferation of Legionella.

ACoP L8 specifies that hot water should be stored at no less than 60°C and distributed at no less than 50°C, obtainable at user outlets within one minute of opening.

Cold water should be stored and distributed at no more than 20°C, obtainable at user outlets within two minutes of opening.

The temperature of mixed/ blended water from Thermostatic Mixing Valves should be no more than 43°C to prevent scalding and ideally no less than 39°C.

The following hot and cold water temperatures were taken at selected outlets as follows:-

Location	Hot °C	Cold °C	Mixed °C	Comments
Swallow Wing Kitchenette Sink	53.2	10.3	40.1	Satisfactory
Kingfisher Wing Room 61 Hand Basin	53.0	10.9	41.1	Satisfactory
Kingfisher Wing Toilet (by Room 67) Hand Basin	53.0	12.0	39.3	Satisfactory
Reception Area Main Kitchen Staff Toilet Hand Basin	60.1	11.4	60.1	Not Satisfactory
Reception Area Laundry Sink	60.3	10.5	42.8	Satisfactory

HAMPSHIRE COUNTY COUNCIL

ACoP L8 DOCUMENTATION/LOGBOOK AND RISK ASSESSMENT / REVIEW AUDIT

SITE NAME:	Westholme OPH
LOCATION:	55 Harestock Road Winchester Hampshire SO22 6NT
CONTACT ON SITE:	Christine Chirimumimba
DATE OF AUDIT:	12-3-2014
NAME OF AUDITOR:	Mr Chris Wilson Freeston Water Treatment Limited

ITEM	TASKS		COMMENTS
		YES / NO	
1.	Audit Date	12-3-2014	
2.	Site Management Audit signed	YES	
3.	Contact details complete and up to date	YES	
4.	Responsibility details complete and up to date	YES	No Deputy Responsible Person listed
5.	6 monthly water tank inspections up to date	NO	
6.	Training records present and up to date	YES	E-Learning only. Last carried out on 5-2-2014 by the Maintenance Operative
7.	Contractor visits recorded	YES	
8.	Monthly boiler/calorifier temps checked	YES	
9.	Monthly temperature – taps checked	YES	
10.	Weekly all outlets flushed and recorded	YES	

11.	Weekly low use outlets flushed and recorded	PARTIALLY	There are contractors that are building a new extension. They should flush all domestic water outlets within their areas of the site within their responsibility on a weekly basis (without creating an aerosol) and this be recorded within the HCC logbook when carried out. It is unknown if this is being carried out for certain.
12.	Weekly shower disinfection and clean and recorded	PARTIALLY	Not for the last three weeks
13.	Quarterly shower descale and recorded	YES	
14.	Monthly sentinel taps temps checked and recorded	YES	
15.	Six monthly temperature probe calibration	NO	
16.	Defects entry made when test off spec	NO	There is no records page within the logbook for this to be recorded
17.	Appropriate corrective action undertaken for Item 16	NO	See above
18.	Each task dated	YES	
19.	Each task signed for	YES	
20.	Laboratory TVC certificates up to date	NO	

21.	Laboratory LP certificates up to date	NO	
22.	Disinfection certificates up to date	NO	

ACoP L8 RISK ASSESSMENT / REVIEW AUDIT

Risk Assessment / Review Date		12-3-2014		
REF	Risk Assessment Summary of Recommendations	COMPLETE? YES / NO	COMMENTS	PIC REF
1	Boiler Room – There is a dead leg on top of the calorifier.	YES		
2	Boiler Room – There is a swan neck type dead leg pipe to a pressure gauge on the cold water booster pumps outlet pipe.	YES		
3	Boiler Room – There is a dead leg on the mains cold water rising main.	NO		
4	Boiler Room- There is a dead leg on the flow pipe.	YES		
5	Purge the calorifier to drain on at least an annual basis and record when carried out.	UNKNOWN		
6	If access allows, visually inspect the calorifier internally for scale and sludge on an annual basis.	UNKNOWN		
7	Commence monthly temperature monitoring of inlet pipe to the TMVs (not just the blended water outlet) and record in the water systems logbook.	NO		

8	There are inline scale reducers on the cold water pipes to the pot wash machines within the Sluice Rooms. These should be cleaned / maintained in line with the manufacturer's recommendations.	NO		
9	Commence six monthly temperature monitoring of the cold water storage tank and record results within the logbook.	NO		
10	I would recommend Bacteriological and Legionella water samples be taken if the temperatures fall out of the recommended limits.	NO		
11	Ensure Deputy Responsible Persons are appointed and are competent and adequately trained.	NO		
12	Ensure the new maintenance operative on site is competent and adequately trained in Legionella management	NO	E-Learning only course undertaken.	

13	There is a water softener for the dishwasher within the Main Kitchen. This should be disinfected and maintained in line with the manufacturer's recommendations.	NO		
14	Clean and disinfect the domestic cold water storage tank as soon as is practicable and repeat annually if required.	NO		

ACoP L8 AUDIT ADDITIONAL COMMENTS/FINDINGS/RECOMMENDATIONS

REF	COMMENTS	PIC REF
1	Please refer to the RECOMMENDATIONS and also the SUMMARY sections within the main Review document below for all relevant further information and conclusions.	

RECOMMENDATIONS

- Dead leg pipework are ideal areas for the proliferation of bacteria and should be removed or put on a weekly flushing regime (without creating an aerosol) and recorded.
Dead legs were found in the following areas:-
 - DL1 - Boiler Room – There is a dead leg on the mains cold water rising main.
 - DL2 - Boiler Room - There is a new dead leg on the flow pipe of the calorifier.
- Purge the calorifier to drain on at least an annual basis and record when carried out.
- If access allows, visually inspect the calorifier internally for scale and sludge on an annual basis.
- Monthly temperature monitoring of all the sentinel and a representative amounts of hot and cold outlets is being carried out and recorded. On non-sentinel outlets, where TMV's (Thermostatic Mixing Valves) are fitted, the temperature is only being taken from the blended water at the outlet. It should be ensured that it is taken from the hot pipe immediately before it enters the TMV.
- There are inline scale reducers on the cold water pipes to the pot wash machines within the Sluice Rooms. These should be cleaned / maintained in line with the manufacturer's recommendations. It is not thought that this is being carried out.
- Commence six monthly temperature monitoring of the cold water storage tank and record results within the logbook.
- I would recommend Bacteriological and Legionella water samples be taken if the temperatures fall out of the recommended limits.

- Ensure Deputy Responsible Persons are appointed and are competent and adequately trained.
- There is a rubber joint connecting the hot return pipe on the calorifier. It must be ensured that the rubber is of a WRAS (Water Regulations Advisory Scheme) approved material.
- There are two water softeners within the Main Kitchen. These should be disinfected and maintained in line with the manufacturer's recommendations. It is unknown if this is being carried out.
- Clean and disinfect the domestic cold water storage tank within the near future and repeat annually if required.
- Ensure that the contractors building the new extension flush all domestic water outlets within their areas of the site within their responsibility on a weekly basis (without creating an aerosol) and that this be recorded within the HCC logbook when carried out.
- Fit a temperature gauge to the domestic hot water flow pipe on the calorifier within the Boiler Room.
- Ensure that all Arjo / Malibu etc. type baths are serviced and maintained in line with the manufacturers recommendations e.g. seals and hoses changed, filters cleaned and disinfected etc. This should all be recorded within a logbook when carried out. Although I was informed that this has been carried out in January 2014 there was no facility within the logbook to record this for this date, the records start on the second quarter of 2014.

- Records within the Logbook state that the maintenance operative undertook an 'E-Learning' Legionella course on the 5th February 2014. I would recommend that full Legionella training be given to any staff involved with Legionella management
- A Written Scheme should be prepared to ensure that all necessary controls are maintained, monitored and remain effective.

BS8580 states – 'Note- the Risk Assessment does not involve the preparation of the written scheme but rather provides information that is critical to the preparation'.

Regulations and guidance regarding the Written Scheme can be found in ACoP L8 Paragraphs 52-76.

SUMMARY

Since the 2012 Risk Assessment Review was carried out a new water systems logbook has been put in place for 2014 and is in use.

I would recommend that the maintenance operative and other staff who may carry out Legionella management be fully trained in Legionella management as soon as is practicable.

Some remedial works have been carried out by Freeston Water Treatment Limited since the last Risk Assessment Review and this is an ongoing planned maintenance agreement between Freeston Water Treatment and Hampshire County Council.

Completed remedial work carried at Westholme OPH includes some dead leg removal. The domestic cold water storage tanks has not been cleaned and disinfected for many years and I would recommend that this be carried out within the near future.

Legionella management including temperature monitoring of outlets and calorifier; flushing of infrequently used outlets and showerhead and hose descaling is being carried out and recorded.

There are contractors that are building a new extension. They should flush all domestic water outlets within their areas of the site within their responsibility on a weekly basis (without creating an aerosol) and this be recorded within the HCC logbook when carried out. It is unknown with certainty if this is being carried out.

The hot outlet temperatures are only being taken from the outlets and not on the inlet pipework to the TMV's (with the exception of the sentinel outlets). I was informed that this will be carried out and recorded within the logbook in future.

Annual purging of the calorifier and descaling is not being carried out.

Ensure that all Arjo / Malibu etc. type baths are serviced and maintained in line with the manufacturer's recommendations e.g. seals and hoses changed, filters cleaned and disinfected etc. This should all be recorded within a logbook when carried out.

A Written Scheme should be prepared to ensure that all necessary controls are maintained, monitored and remain effective.

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