

Valentine Primary School Review Report 11th April 2017

This Legionella review survey was carried out on the 11th April 2017; there was seen to be two water systems logbooks in place for the school's water systems; one for Westwood Block and one for Eastwood Block; these were seen filed in the site manager's office. The logbook documentation was seen to be in a fair order but very confusing as areas are recorded as North and South; the responsible persons and deputies' names for this school have been nominated in writing within section 2 of each logbook. The logbooks do not appear to have any record of being audited; I would recommend this is carried out at least on an annual basis. The monitoring records were seen to be up to date as of March 2017 but there appears to be many records missing for the Westwood Block; I was informed by the site manager that flushing is carried out and recorded on a weekly basis. The 2014 risk assessment carried out by Aquadition was seen filed within section nine of each logbook.

There are a total of six hot water calorifier's within the primary school; records seen indicate that only two are being monitored; again it is confusing to determine which other calorifier is being monitored along with Westwood boiler room calorifier; all hot water calorifier's should be monitored monthly. The logbook documentation has a vast amount of paper work; monthly monitoring records each month consists of approximately 6 sheets or more of paper; there seems to be repetitive temperature monitoring the same on some sheets and they are confusing.

There seems to be very little communication between the contractor Aquadition and the school site manager; there has been many months of reduced hot water storage and return temperatures recorded but no fault sheets have been raised so this can be rectified.

I would recommend the site manager meets with the contractor Aquadition and request an explanation of the monitoring being recorded and ensure all calorifier's are monitored and any faults found be recorded and reported to the site manager and also on fault sheets for Southampton City Council to be rectified.

The old fire hose reel supply pipe work was seen and capped off in Eastwood Block; an investigation should be carried out to determine if this fire main is attached to the rising main and if still live; I would recommend it be drained and disconnected from the rising main pipe work if this is the case.

Hot water storage within Valentine Primary School is by six hot water calorifier's; one located in Westwood main boiler room, one in the Admin / Reception block and four other calorifier's located at the toilet areas also in Eastwood Block.

The Westwood block boiler room calorifier consists of an Andrews type calorifier with a capacity of 276 litres; the calorifier is gas fired and has factory fitted insulation beneath the outer metal casing. The calorifier is supplied directly from the mains water service via a pressure reducer; the calorifier is fitted with a return system this has a single return pump fitted; at the time of this 2017 review the calorifier storage and return temperatures were found to be low; records seen indicate this has been low for some time and should be addressed at the earliest opportunity.

Westwood Boiler Room Flow	52.3°C This is Not Satisfactory.
Westwood Boiler Room Return	45.0°C This is Not Satisfactory

Hot water should be stored at a minimum of 60.0°C and the return should maintain a minimum of 50.0°C or more at all times; I would recommend this be adjusted to achieve the desired temperatures

The second calorifier is located in a cupboard space in the staff room area in the Admin / Reception block; the calorifier is a Megaflo type heated by the LTHW system and also has a single electric element located at the base of the vessel. The calorifier has factory fitted insulation located beneath the outer metal casing; the calorifier is fitted with a return system this has a single return pump fitted. I would recommend the return pump be investigated for the correct operation as the start / stop switch was on but not illuminated and the return temperature was low. Both the storage and return temperatures were found to be low at the time of this review; no records were seen to indicate this calorifier is being monitored monthly; I would recommend this calorifier be monitored monthly and also adjusted to achieve the desired recommended storage and return temperatures.

Admin / Reception Block Flow 50.0°C This is Not Satisfactory.

Admin / Reception Block Return 36.0°C This is Not Satisfactory

Hot water should be stored at a minimum of 60.0°C and the return should maintain a minimum of 50.0°C or more at all times; I would recommend this be adjusted to achieve the desired temperatures

The third hot water calorifier is located in Eastwood Block room 4 serving the toilet areas; the calorifier is again a Megaflo type with a capacity of 125 litres heated by the single electric element located at the base of the vessel. The calorifier has factory fitted insulation located beneath the outer metal casing; the calorifier is fitted with a return system this has a single return pump fitted. The storage temperature was found to be slightly low at the time of this 2017 review; no records were seen to indicate this calorifier is being monitored monthly; I would recommend this calorifier be monitored monthly and also adjusted to achieve the desired recommended storage temperatures.

Eastwood Block Room 4 Flow **58.0°C This is Not Satisfactory.**

Eastwood Block Room 4 Return **53.0°C This is Satisfactory**

Hot water should be stored at a minimum of 60.0°C; I would recommend adjustment to achieve the desired temperatures

The fourth calorifier is located in Eastwood Block Art Gallery area in a cupboard space believed to be room 29; the calorifier serves the toilets and kitchen in this area. The calorifier is a Megaflo type with a capacity of 210 litres; the calorifier has factory fitted insulation located beneath the outer metal casing; the calorifier is fitted with a return system this has a single return pump fitted. I would recommend the return pump be investigated for correct operation as the return temperature was very low; it also looks as if the return pump is in need of replacement as it has been leaking in the past. Again the calorifier storage temperature was found to be slightly low and the return temperature was very low; no records were seen to indicate this calorifier is being monitored monthly; I would recommend this calorifier be monitored monthly and also adjusted to achieve the desired recommended storage temperatures.

Eastwood Block Room 29 Flow **58.4°C This is Not Satisfactory.**

Eastwood Block Room 29 Return **25.0°C This is Not Satisfactory**

Hot water should be stored at a minimum of 60.0°C and the return should maintain a minimum of 50.0°C or more at all times; I would recommend this be adjusted to achieve the desired temperatures

The fifth calorifier is located in Eastwood Block in room 55 serving the cleaners and toilet areas; the calorifier is a Megaflo type with a capacity of 125 litres; the calorifier is heated by a single electric element at the base of the vessel. The calorifier has factory fitted insulation beneath the outer metal casing; the calorifier is fitted with a return system this has a single return pump fitted. The storage temperature was found to be very high at 75.0°C at the time of this review which is extremely high and is a scalding issue; I would recommend the temperature be decreased to 60.0°C at the earliest opportunity. The return temperature was found to be very low; the return pump should be checked for correct operation and also check system is opened up correctly. No records were seen at the time of this 2017 review to indicate this calorifier is being monitored monthly; I would recommend this calorifier be monitored monthly and also adjusted to achieve the desired recommended storage and return temperatures.

Eastwood Block Room 55 Flow 75.0°C This is Satisfactory.

Eastwood Block Room 55 Return 24.0°C This is Not Satisfactory

Although the hot is Satisfactory in the control of Legionella it is a scalding risk and should be adjusted to store hot water at 60.0°C

The sixth calorifier is located in Eastwood Block room 82 serving the cleaners and toilet areas; the calorifier is a Megaflo type with a capacity of 125 litres; the calorifier is heated by a single electric element at the base of the vessel. The calorifier has factory fitted insulation beneath the outer metal casing; the calorifier is fitted with a return system this has a single return pump fitted. Again as with all hot water calorifiers all should be monitored on a monthly basis and the storage and return temperatures monitored and recorded in the logbook documentation.

Eastwood Block Room 82 Flow 60.0°C This is Satisfactory.

Eastwood Block Room 82 Return 53.5°C This is Satisfactory

There are also local water heaters within Westwood and Eastwood blocks sited within some toilets and classroom areas these are supplied directly from the mains water services; it is recommended in the ACoP L8 and HSG 274 part 2 that water heaters with no greater than 15 litres capacity should operate at 50° - 60°c.

There were found to be some deadleg areas within Valentines Infants School these were noticed in the following areas:

- There is deadleg pipe work in the Admin / Reception block by the toilet door; recommend removal.
- There is deadleg pipe work in Eastwood block ladies' toilet room 38 beneath the wash basin; this is a long pipe run; recommend removal.
- Old fire hose reel pipe work was seen in the Primary school; ensure this is no longer connected to the live main and is drained of any water.

TMVs are fitted within the Primary School; these should be serviced and maintained to manufacturer's recommendations; no records were seen to indicate this is being carried out.

There is a shower within the disabled toilet area in Eastwood block I was informed this is flushed weekly; records seen indicate temperature monitoring is carried out but no records were seen indicating when the showerhead was last cleaned and descaled. The showerhead should be cleaned and descaled at least on a quarterly basis or at the rate of fouling.

There are drinking water fountains within the school ensure these all get regular use or at least flush on a weekly basis especially those with long pipe runs.

		Remedial / Recommendations	Priority
Valentine Primary School		Start monthly temperature monitoring of all six-hot water calorifier storage and return temperatures and record in logbook documentation.	5
		Ensure all hot water calorifier's are adjusted to store hot water at 60.0C and maintain 50.0C or more on the return system. Reduce room 55 calorifier to store hot water at 60.0C; at present it is at 75.0C a scalding risk.	5
		Investigate the hot water return pumps for correct operation on the following calorifier's; Admin block, Eastwood block Art Gallery room 29 and Eastwood block room 55.	5
		Remove any deadleg pipe work.	5
		Investigate old fire hose reel supply pipe work is drained and disconnected from the live water services.	5
		Legionella control records should be maintained up to date in the logbook documentation at all times; meet with contractors to determine what is being monitored and address the non-conformities by reporting them on fault sheets to the site manager and Southampton City Council to be rectified.	5
		Ensure shower is used on a regular basis or continue to flush weekly; clean and descale showerhead at least on a quarterly basis or at the rate of fouling; record in logbook when carried out.	3
		Flush all infrequently used outlets weekly and record when carried out. Continue during shut down periods and school holidays.	3
		Ensure all long pipe runs on the mains water service pipe work are insulated to help prevent elevated water temperatures.	3
		Maintain and service TMV (blender valves) as recommended by the manufacturers.	3
		Replace galvanised metal domestic pipe work where fitted at earliest opportunity.	3
		Audit logbooks at least on an annual basis; consider removing old log sheets and archive to allow better access in logbooks.	3

1 = Insignificant risk.

2 = Controlled risk.

3 = Risk is controlled, but deteriorating conditions could increase risk.

4 = Potential hazards identified, but uncertain about risk.

5 = Risk Uncontrolled.