POLICY DOCUMENT

Policy Title:	Water Safety Policy
Policy Group:	Health and Safety
Policy Owner:	General Manager
Issue Date:	May 2022
Review Period:	24 months
Next Review Due	May 2024
Author:	Joanna Speed
Cross References:	COSHH Policy Major Utilities Failure Policy Maintenance Policy Hydrotherapy Policy Health and Safety Policy Hydrotherapy Maintenance Policy
Evidence:	The control of Legionella bacteria in water systems Approved Code of Practice (L8) HSG 274 Legionnaires Disease technical Guidance Health Technical Memorandum 04-01: Safe water in healthcare premises HTM 04.01 addendum Pseudomonas Aeruginosa – Advice for augmented care units
How implementation will be monitored:	Water sampling, regular temperature checks
Sanctions to apply for breach:	Further training, review of contractor's performance or disciplinary action
Computer File Ref.	O:policy book:
Policy Accepted by MT	25th June 2022
Sign-off by CEO	

1. Statement of purpose:

This policy describes the known particular hazards arising at Holy Cross Hospital and the arrangements that have been put in place to manage the risks identified.

2. Policy Statement:

The management has a duty under Health and Safety at Work Act 1974 (HSWA) and the Control of Substances Hazardous to Health Regulations 2002 (COSHH) concerning the risk of bacteria, coliforms, viruses and Legionella. In the approved code of practice it is recommended that a Risk Assessment of the site and all water systems be undertaken. The hospital has engaged the services of a company with expertise in this field to conduct a survey

of the buildings and water system and make recommendations on any action to be taken. The full report is available to be consulted by any person with a reasonable need to have information. This Survey is completed bi-annually. The survey includes all buildings on site.

The management is also required under the Health and safety at Work act 1974 and Health Technical Memorandum 04-01 to ensure that the risk to patients from scalding water and hot surfaces is minimised as far is practicable.

3. Description of the Hazards

Micro organisms are naturally found in rivers, lakes and reservoirs so water coming into the building will contain bacteria. In order for these bacteria to multiply they need nutrients found in algae, sludge, slime, bio-film or scale: all of which can be present in water systems. Tanks and outlets should be kept clean to reduce the matter on which bacteria may grow. Particular areas within the hospital that could promote bacterial growth are the outside water features

Water temperatures between 20ºC and 45ºC encourage bacteria to multiply so temperatures should be kept out of this range to minimise bacterial growth. Water is kept at 60ºC in tanks and 50ºC in water pipes. Water in the hydrotherapy pool is at 33 ºC and therefore must be carefully managed to ensure that there is no bacterial growth.

Legionnaire's disease is spread through water that is in aerosol form such as showers. There are around 250 reported cases of Legionnaires disease each year and it is the vulnerable population like patients at Holy Cross Hospital that are more likely to contract Legionnaires Disease. Legionnaires Disease is a flu-like illness with an incubation period of between 2 to 10 days. Not everyone exposed will develop symptoms of the disease and those that do not develop the full blown disease may only present with a mild flu-like infection. The fatality rate is 12% of reported cases.

Pseudomonas aeruginosa is the definition of a tough bacterial strain, able to survive in harsh environments.

It is found widely in soil and stagnant water, and can infect humans and plants.

It does not usually cause illness in healthy people, but is described as an "opportunistic" organism, causing serious infection when our normal defences are weakened.

This means that it represents a genuine threat to our patients.

Patients at Holy Cross Hospital are at greater risk than the average population of burns and scalds. Surface temperatures of radiators should not exceed 43ºC and delivered water must be below 41ºC to reduce the risk of burns and scalds.

There is a risk of drowning in HT pool, water butts and external water features. Risk assessments are carried out and control measures put in place to ensure the likelihood of this happening is very low.

4. The Role of the Chief Executive

The Chief Executive is required to ensure that a Risk Assessment for the Control of Water Hygiene in water Systems is carried out on all buildings on site. P H Water Technologies undertook the last Risk Assessment in May 2021. In the course of this Risk Assessment samples of stored water were taken and an assessment of the water system and management scheme was made.

The Chief Executive is responsible for ensuring adequate resources are available to implement the recommendations arising from the Risk assessment.

The Chief Executive is responsible for ensuring that The Scheme of Management to comply with ACOP L8 is carried out and that documentation is completed.

The Chief Executive is responsible for ensuring that adequate risk assessments are undertaken and recorded of all other related risks.

5. Role of the General Manager

The General Manager is responsible for ensuring that the Risk Assessment is reviewed every two years and that recommendations for remedial work are brought to the attention of the Management Team.

The General Manager is responsible for ensuring that cleaning and chlorination of tanks is carried out as necessary and that records are kept of these checks.

The General Manager arranges for monthly water sampling of the hydrotherapy pool to check for bacterial growth.

The General Manager acts as the point of contact with the water supply company to identify any issues that may affect the water supply and to ensure that all steps are taken to minimise risk of harm in the event of temporary failure of the supply.

6. Role of Caretakers the Support Services team are required to undertake the following checks and record all results, taking corrective action when necessary:

- Record water temperatures at all outlets after running the water for one minute. This is to ensure that, where vulnerable persons may use the outlet water, temperature does not exceed temperatures listed below. These recorded temperatures must be logged. Action must be taken if temperatures exceed those stated. This action must be recorded.(Filed in section 6 of Water Treatment and hygiene Log)
- Ensures Cold Water Failure on TMV3 is working effectively on all outlets located where patients may be at risk of scalding

Application	Maximum set hot water temperature ºC
Shower	41ºC
Washbasin	41ºC
Bath	43ºC

* These temperatures are taken from the Health Technical Memorandum 04-01: The control of Legionella, hygiene, “safe” hot water, cold water and drinking water systems

- Record temperature of sentinel taps on both hot and cold water system these are recorded on the monthly temperature checklist, take samples from other taps
    - Cold water should be run for 2 minutes and temperature should be below 20^{o}C
    - Hot water should be run for 1 minute and temperature should be 50^{o}C or above
- Test & record the water temperatures at calorifiers monthly to ensure that they are at 60ºC .(Filed in section 6 of Water Treatment and hygiene Log
- Clean showerheads and taps in all areas monthly to prevent build up of scale. A log must be kept.(Filed in section 7 of Water Treatment and hygiene Log)
- Check tanks monthly for the presence of organic material. Evidence of this checking procedure must be logged.(Filed in section 7 of Water Treatment and hygiene Log)
- Check the condition of accessible pipe work in all areas on site annually, record findings

- Maintain TMV3 valves in accordance with manufacturers' instructions(Annual servicing is carried out by Water Treatment Contractor)
- Flush through all unused outlets weekly and keep a record .(Filed in section 6 of Water Treatment and hygiene Log (appendix II)
- Measure water temperatures in tanks on a six monthly basis and record temperatures .(Filed in section 6 of Water Treatment and hygiene Log (appendix I)
- Remove radiator covers for cleaning, check and maintain as necessary to ensure that the risk of patients being scalded is reduced as far is practicable.
- Take regular checks of pool water quality throughout the day. (refer to hydrotherapy policy) PH of water and Chlorine levels are tested along with temperature and clarity
- Check the results of routine monitoring of pool water carried out by PH Water Technologies
- Check the surface temperatures of radiators to ensure it remains below 43ºC. Checks carried out quarterly and recorded (appendix III)
- Ensure water features are kept in good condition by ensuring they are kept free of build up of algae and excessive plant growth and the filters are kept clean and operating correctly
- Support services staff must bring any defects to the attention of General Manager

7. Arrangements for Monitoring Compliance

Water treatment contractor audits log book and ACoP L8 on a quarterly basis.

8. Review

This policy has been reviewed for adverse impact on people with protected characteristics within the meaning of the Equality Act 2010 and no such impact was found.

Cold water storage

Main Hospital has 2 x GRP tanks approx. 2750 litres in roof space

Staff accommodation -2 x GRP tanks approx. 3000 litres (serving Main hospital Kitchen and laundry as well as staff accommodation)

Small CWS tank to serve potato peeler in main kitchen

Hydrotherapy – 800 litre tanks in roof space above Outpatients gym

Cold water storage

- The water stored in the tanks will not exceed one day's usage
- Check the temperature of tanks every six months and record findings (In House)
    - The water should remain at a temperature of less than 20^{o}C
    - Temperature should be checked at ball valve
- Contamination and build-up of sludge, scale and rust should be avoided (contractor)
    - Tanks should be visibly inspected at least annually – This is carried out by our water treatment contractors who clean and chlorinate the tank at the same time
- Cold water outlets including taps and showerheads should be checked to ensure that water does not exceed 20^{o}C (In house)
    - All sentinel taps are checked along with representative taps throughout the system.

Hot water storage

Two calorifiers in main boiler room

Two Calorifiers in laundry

Plate heat exchanger in Hospital plant room

Hot water Systems

- Calorifier or hot water cylinder should be visually inspected to ensure that there is no build-up of sludge and scale at least annually (Contractor)
    - Check flow and return temperatures monthly, Hot water should be stored at at least 60^{o}C to kill Legionella (in house)
- Check water temperature at sentinel taps which should be at least 50^{o}C within one minute of running (in house)
    - If TMVs are fitted measure temperature at inlet to TMV
    - A selection of representative outlets will also be checked using a surface probe

Pipework and outlets

- Remove dead legs/blind ends or ensure regular flushing of dead legs
- Ensure regular flushing of little used outlets and all showers

Showerheads

- Avoid build-up of contamination on showerheads

- Dismantle, clean and descale on a monthly basis

Water Hygiene programme carried out under contract

Contractor carries out the following work for us under contract.

- Six monthly sampling/analysis for general TVC coliforms and E-Coli (10 samples collected from random locations on a six monthly basis)
- Six monthly sampling for Legionella (15 samples collected from Cold water storage and furthest outlet from tank, from the calorifier flow or closet tap to calorifier)
- Six monthly sampling for Pseudomonas Aeruginosa (30 samples taken from representative locations on both wards)
- Carry out an annual visual inspection of cold water storage tanks
- Monitor temperature of incoming main and cold water storage tank on a six monthly basis
- Collect samples and record condition of water from all 11 HWS calorifier drains (annually)
- Collect samples and record condition of water from HWS calorifier drains on an annual basis
- Annual Clean and chlorination of CWS tanks and domestic services
- Annual servicing of TMV3 in accordance with HSG274
- Quartley audit of log book and check of ACoP L8 compliance and records.

Appendix I

	Temp ºC	Cold water Supply failure test	Sentinel tap Temp º C		Temp ºC	Cold water Supply failure test	Sentinel tap Temp º C
101				201			
102/3				202/3			
104/5				204/5			
106/7				206/7			
108				208			
109/10				209/10			
111/12				211/12			
113/14				213/14			
115/16				215/16			
117/18				217/18			
119/20				219/20			
Bathroom South				Bathroom South			
Bathroom west				Bathroom west			
Shower				Shower			
Shower				Shower			
Soiled Handling				Soiled Handling			
Kitchen				Kitchen			
Corridor Taps				Corridor Taps			
103				202			
106				206			
109				209			
111				211			
Staff Toilet			✓	Staff Toilet			✓
St Hugh's				Hydrotherapy			
Kitchen				Disabled WC			
W.C Basin				Visitors WC			
Bathroom Basin				staff change (M)			
Bathroom Bath				Staff Change (F)			
Disabled Bath				Changing (M)			
Disabled basin				Changing (F)			
Utility Room				Disabled Change			✓
Nurse's Home				Staff Toilet			□
1st Floor toilet (W)			✓				□
Grd Floor ladies change			✓				□
Stores Sink			✓				
1st Floor bathroom east			✓				
				Plant Room			✓

	Temp °C	Cold water Supply failure test	Sentinel tap Temp ° C		Temp °C	Cold water Supply failure test	Sentinel tap Temp ° C
Patients activities				**St Marg's FirstFlr**			
Sink				Bathroom east (S)			
Disabled Toilet				Bathroom east (N)			
Kitchen				Laundry			
Servery				Kitchen			
				Bathroom West (S)			
In patients Physio Gym				Bathroom West (N)			
Sink				**St Marg's Grd**			
Basin			✓	Female Basin (L)			
First Floor Gents Toilet				Female Basin (CT)			
First Floor ladies Toilet			✓	Female Basin (RT)			
Admin				Male Basin			
Grd Flr Gents WC				Catering Basin			
Grd Flr Ladies WC				Kitchen Sink (veg)			
Consulting Room (reception)				Kitchen Sink prep			
Outpatients PT							
Disabled Toilet			✓	Kitchen Sink Wash up (Rg)			
Consulting Room				Dishwash sink			
Gym E				Dishwash Spray			
Gym S				Kitchen Sink wash up (L)			
Gym C				Cleaners sink o/p			✓
Gym N			✓				
Stored Water							
	Temp °C	Incoming Water Temp		Temp °C	Incoming Water Temp		
Hospital			H/T Tanks				
Tank one			**St Marg's**				
Tank Two			Tank One				
			Tank Two				

Appendix II

Location	1	2	3	4	Descale and clean carried out
Date run					
SAF 1					
SAF 2					
SAF 3					
SMF 1					
SMF 2					
SMF 3					
Male Change					
Female Change					
NR EE Left					
NR WE Left					
NR WE Right					
St Hughs Bathroom 1					
St Hugh's bathroom 2					
HT Female Staff					
HT Male staff					
HT female 1					
HT female 2					
HT male 1					
HT male 2					
Disabled change					
Drench shower					
Drench shower chem plant					
Plant basin					
Chem plant basin					
Outpatients consulting room sink					
Grd Flr Consulting room					
O/P cleaners					
Decking tap					
Senses garden tap					
laundry outside tap					
Therapy room					
therapy Kitchen					

Appendix III

Radiator temperature

Should be below 43**ºC**

SMF	**ºC**	**SAF**	**ºC**
1		1	
2		2	
Bathroom		Bathroom	
3		3	
4		4	
5		5	
6		6	
7		7	
lounge		lounge	
8		8	
9		9	
10		10	
bathroom		bathroom	
11		11	
12		12	
13		13	
14		14	
Alcove		Alcove	
15		15	
16		16	
kitchen		kitchen	
17		17	
18		18	
alcove		alcove	
19		19	
20		20	
		Therapy room	
Corridor grd Floor		Corridor Near 213	
		Corridor near Servery	
		Opposite lift	
		Gym	
		Corridor (art work)	

Date	
Initials	