



**From:** Owen Harkin, Director of Finance

**To:** Trust Board

**Date:** 27th January 2022

**Subject:** Trust Wide Water Safety Works 2021/22

**Action Required:** Presentation of Business Case to gain approval from Trust Board

**Background:**

During 2019, a Water Safety review involving water sampling from a number of domestic hot and cold water systems was undertaken and the results reviewed to ensure compliance with the Trusts Water Safety Management plan. A number of areas of concern were highlighted ranging from non-compliant hot and cold water temperatures, to positive results for Legionella within the hot and cold domestic water systems in a number of Trust facilities.

Those of most notable concern were:

- McCaughey House, Whiteabbey Hospital;
- Dalriada Hospital, Ballycastle;
- Ballycastle Health Centre;
- Mid Ulster Hospital Main Block and
- Antrim Area Hospital Plant Rooms V & W
- Inver 4 Holywell Hospital

These Trust Facilities offer, or support a range of acute and sub-acute hospital services, in some cases seven days per week. A number of key Departments which operate from these facilities include:

- Theatres and Day Surgery;
- Endoscopy;
- Outpatient Physiotherapy;
- Dermatology;
- Midwifery and Gynaecology;
- Cardio Rehab;
- Gynecology;
- Specialist Nurses offices; and
- Medical Records.

In order for Services to be delivered safely and effectively the Trust is responsible for providing appropriate environmental conditions, one of which is the supply and delivery of domestic hot and cold water (DHCW). These hot and cold domestic water systems deliver water to both clinical and regular handwashing sinks, toilets, catering facilities, sluices and clinical treatment

rooms. This is essential to support Departments to meet daily scheduling targets.

### **Statutory Requirements**

In line with Health Technical Memorandum (HTM) 04-01 "Safe Water in Healthcare Premises" & Health and Safety Guidance (HSG) 274 "Legionnaires Disease Technical Guidance" the Trust has a responsibility generate, store and distribute hot and cold water in accordance with these statutory requirements.

Legionella bacteria can cause a number of diseases, the most serious being Legionnaires' disease. It is a potentially fatal form of pneumonia and everyone is susceptible to infection. The risk increases with age and some patient types are at a higher risk including those over 45 years of age, smokers and heavy drinkers, people suffering from chronic respiratory or kidney disease, those with diabetes, lung or heart disease and anyone with an impaired immune system.

*Legionella pneumophila* is the species responsible for 90% of human cases of infection. *L. pneumophila* is divided into 15 serogroups, among which serogroup 1 is the most prevalent disease causing variant. Following the routine sampling undertaken in 2019 McCaughey House was found to have *Legionella pneumophila* Serogroup 1 present in its water supply. No other facility tested had a positive result for this particular variant.

Following the 2019 Water Safety Review the entire hot and cold water networks were reviewed and major work was completed to improve water temperatures and eliminate Legionella bacteria from the water systems tested. This however did not address all the issues noted and considerable further work remains outstanding.

In order to minimise the impact and ensure water safety the Trust took the decision to install "water safe" filters within a number of domestic hot and cold water systems. This allowed all outlets with filters to be used as designed and all Departments deliver a normal service. However each filter has to be replaced every 90 days from the installation date. This has a significant recurring financial implication firstly as a result of the cost of these consumables but also the Estates manpower resource that is required to install and replace every 3 months.

The existing pipework within the water systems has become colonised which is a form of growth/ biofilm that has developed within the internal structure of the pipework, biofilm encourages and facilitates the growth of Legionella within the system.

**Benefits:** The aim is to deliver projects that will ensure the hot and cold water systems within Northern Trust sites listed are upgraded and therefore capable of meeting existing service demands. The project will also improve the safety of all service users through Improved compliance with HTM 0401 "Safe Water in Healthcare Premises, HSG274 "Legionnaires Disease

Total Capital Cost - £605,000.00

**Affordability:** Capital funding of £605k will be sourced from the NHSCT's 2021/22 CRL.

**Risks:** There is a low impact risk associated with implementing a scheme of this nature. The project will be carefully project managed to minimise the impact on business continuity and compliance with statutory standards. The Project Manager will liaise closely with Capital Development to ensure any cost / programme risks are communicated in a timely manner.

**Conclusion** Implementing this scheme will remove current risks and maintenance issues with the existing hot and cold water system.