



ANGEL GUARD



Cooling Tower Case Study

About Angel Guard

Angel Guard are a water management company that seeks to save time, money and most importantly lives. They achieve this through the deployment of many innovative, scientific, and technological solutions.

Founded in 2017 by husband-and-wife duo Jonathan and Elaine Waggott, the company was founded on over 30 years of experience in the water industry and much research and consultation of industry experts, from microbiologists to infection control specialists.



ANGEL GUARD
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The **Situation**

A renowned food and drinks manufacturing company were aware of previous water issues that had occurred within one of their industrial-sized cooling towers.

Upon making contact through a water management company, it was requested that Angel Guard inspect the cooling towers with the Clarence system.

This would allow secure remote monitoring of the pipework and enable it to gather data and provide a comprehensive water quality report.



The **Solution**

To address the issue, an outdoor Clarence C-1 was installed to the pipe of a cooling tower.

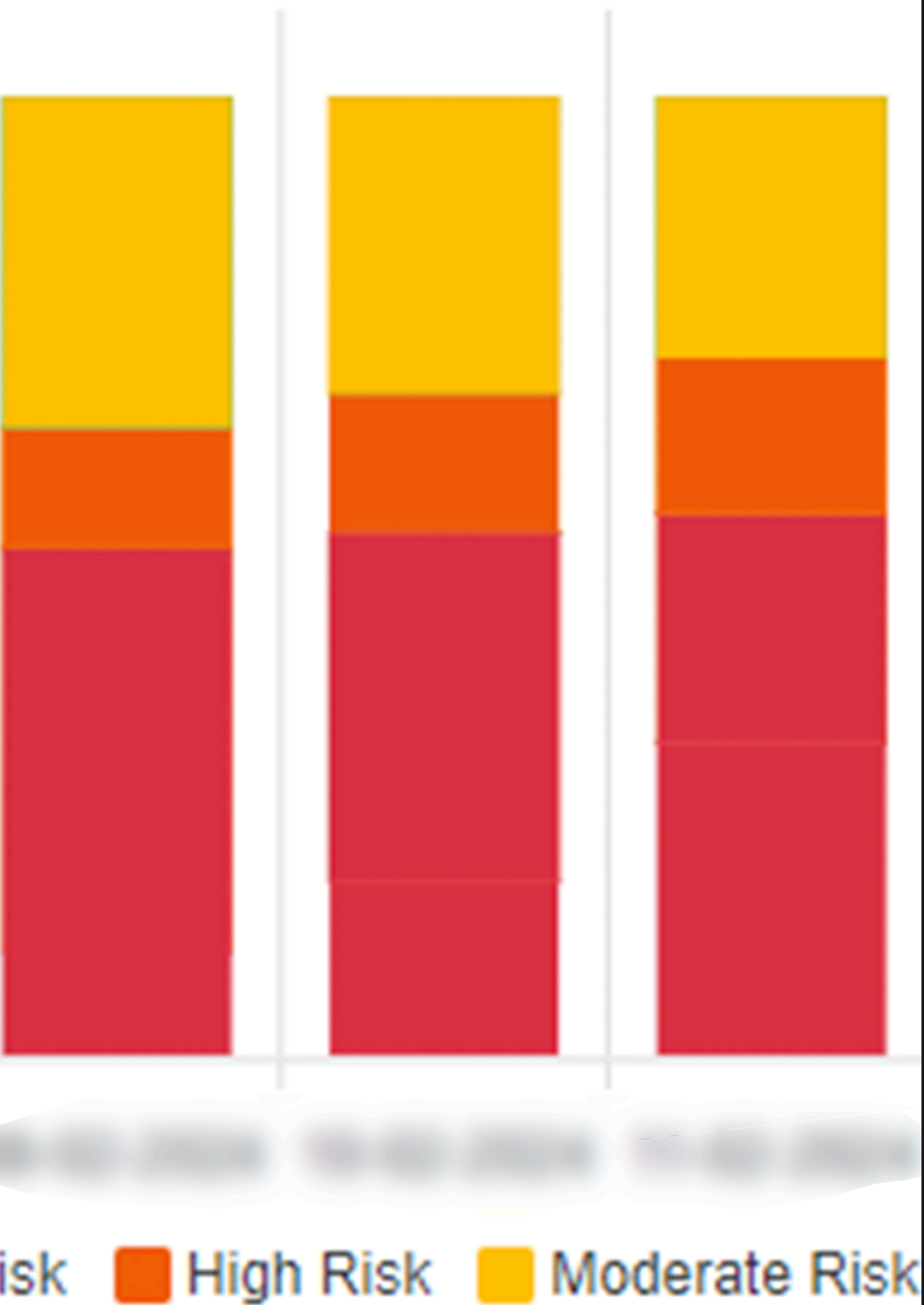
The box provided 24-hour monitoring of the water temperature within the pipework and was able to measure the flow events and for any potential stoppages.

The outdoor Clarence C-1 was also able to monitor the water for potential biofilm contamination indicators.

Once collected, the data would be displayed through the online dashboard Seraph Protect.



7 Day Device Trend



The Results

Seraph Protect displayed that whilst the temperature was indeed originally between the accepted safe parameters over the course of the case study, however the situation would change.

The average temperature was beginning to trend upwards, with the minimum temperature slowly rising to what was originally the average temperature.

This change signalled that there was a risk to water health that called for further observation.

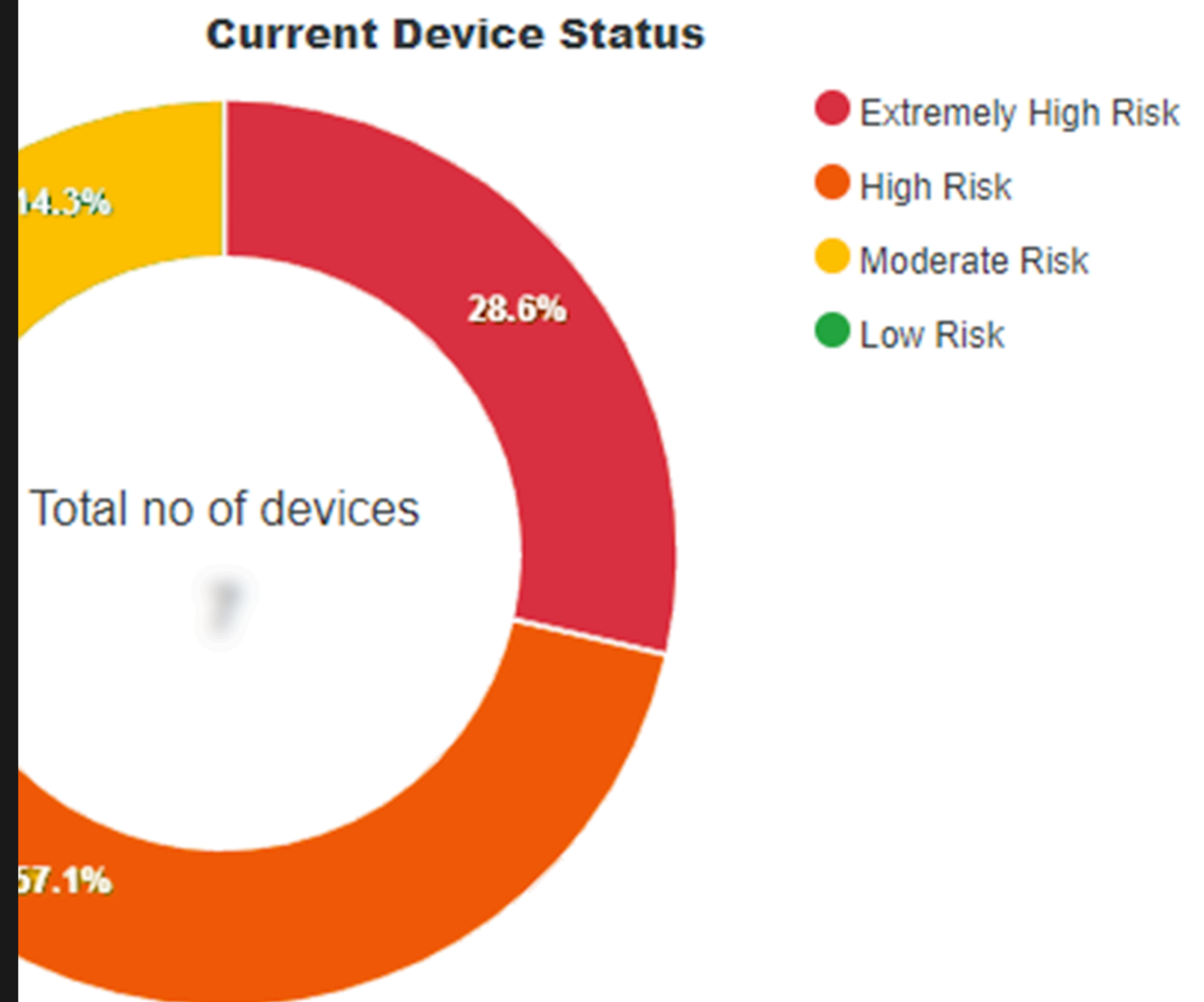


The Results

The Clarence system was also able to show the client the prolonged impact of their chemical dosing, tracking the effective lifecycle of their weekly dose.

Results would show that the chemical dosing was only effective for a short period of time, returning to baseline levels within three days.

In addition, the system was able to identify the growth of a Legionella colony within the cooling tower. This allowed the company to quickly cease operations and enact measures to properly treat the Legionella growth and effectively flush it out much quicker than traditional testing methods.



Mixed Return

Number of Flow Events





The Benefits

The Clarence system collected frequent real-time readings and analysed the data through the Seraph Protect system.

With data being gathered efficiently and quickly, the client was able to quickly identify any issues with their water.

In addition, Clarence was able to gauge the biofilm growth levels within the pipework, with results mimicking independent laboratory results that were simultaneously carried out.



The Conclusion

Following the installation of the Clarence system, the food and drinks manufacturing client continued to see positive results until the agreed termination of the project.

The company benefitted greatly from the amount of data they received and how quickly and conveniently they were able to access it, whilst Angel Guard gained a great amount of information for the Clarence system and how to keep improving their award-winning innovation.

For more on the Clarence system, contact sales@angel-guard.co.uk for more today, or call 0141 280 9488.

