

Wood Wharf is a 23 acre site in Canary Wharf, London due to be completed in 2023 and will be providing offices, residential homes and retail.

The length of programme and complexity and scale of the site poses a variety of problems from design and construction perspectives

Problem

This project was the infrastructure for the vast Wood Wharf development project consisting numerous buildings, largely for residential and commercial use. Some of the buildings would require softened water to supply cooling towers, resulting in a very high softened water requirement. To treat the flows needed, the appropriate water softener was too large for the space available.

Due to the size of the water softener and expected water consumption, there would be an undesirable need to frequently top up with salt, resulting in significant material and labour costs.

As the development will be constructed in phases, there was a concern that the water may be stagnant in both the central tank and some of the distribution services.

There were also concerns that closed system water quality may not be maintained during the construction programme for the whole development. Some of the closed systems are operating at higher than normal pressures due to the height of the buildings.

Solution

Goodwater recommended and supplied a bespoke twin stream duplex water softener that would control the flow of water through two softener vessels in parallel, thereby achieving the high flows required while reducing the overall height of the unit and ensuring that the treatment package would fit in the available space.

Goodwater also supplied a bulk salt saturator to allow for the bulk delivery of salt via tanker, significantly reducing costs and the client's labour requirement. We also assisted with the design of the salt fill pipe to the saturator as the floor to ceiling height did not allow for a standard saturator installation.

Goodwater recommended and supplied chlorine dioxide dosing to ensure that the central water storage tank and associated distribution pipework was suitably dosed to minimise growth of legionella, biofilms or other bacteria during periods of lower than expected usage.

Finally, Goodwater also supplied bespoke automatic chemical dosing systems to maintain treatment levels within the closed systems and were able to introduce chemical into high pressure systems.



Conclusion

The site has been able to maintain a high level of water quality within the hot/cold water services and various closed systems, while also having a supply of soft water to prevent scale formation in sensitive equipment. This has been provided under challenging technical and spatial conditions and has allowed the client to save money, lengthen plant lifespan and help meet their health and safety requirements.



Scope of supply:

- ✓ 1 No. 350/2910 twin stream duplex water softener
- ✓ 1 No. F10 bulk salt saturator
- ✓ 1 No. Dioxychlor III (Chlorine Dioxide)
- ✓ Automatic chemical dosing sets, some designed to operate at high pressures
- ✓ Assembly
- ✓ Commissioning



The equipment detailed in this case study are part of the Pegasus and Dorado ranges. For more information visit our website –

<https://www.goodwater.co.uk/equipment-ranges/>

Chlorine Dioxide plant