

## Tottenham Hotspur Stadium

In 2019 the new Tottenham Hotspur Stadium opened to the public, but prior that Goodwater helped Buro Happold consultants with the design of the water systems building in important features to minimise the risks of microbiological issues arising in the water systems

### Problem

As part of the construction of the new stadium, significant concerns relating to the cleanliness of the hot and cold water were raised with Goodwater.

The site has very large water storage tanks, to provide water to over 62,000 people on match days, but with very low usage at other times – conditions that lend themselves to the growth of bacteria, including legionella, that can be dangerous to public health.

In addition, scale was highlighted as being undesirable as the water quality in London is known to be amongst the hardest in the country.



### Solution

Goodwater recommended and supplied Dioxychlor Plus chlorine dioxide dosing systems which provide protection in a number of ways:

- ✓ re-circulating the tank water to prevent stagnation
- ✓ dosing chlorine dioxide to act as a disinfectant within the tank water
- ✓ providing a residual treatment throughout the hot and cold water services
- ✓ providing a residual treatment throughout the hot and cold water services
- ✓ continuously monitoring the chemical level within the tank water and dosing additional treatment when needed
- ✓ preventing biofilm formation on internal tank and pipework surfaces

Goodwater also supplied ten physical water conditioners to minimise scale build up within the hot water generation plant.



## Tottenham Hotspur Stadium



One of the Chlorine Dioxide systems treating one of the massive 136,000 lts CWS tank



### Conclusion

The site has been able to operate safely and comply within the Health & Safety Executive's guidelines.

In the first year of operation, all microbiological samples taken have shown the water to be free from bacteria and safe for human consumption in spite of the challenging operating conditions.

### Scope of Supply

#### Dorado Range

2 No. Dioxychlor Plus units

#### Phoenix Range

10 No. Water Conditioners:

- 9 No. GWM400/Fe
- 1 No. GWM150/Cu

#### Cygnum Range

1 No. 4" RRF (Revers Rinse Filter)

Associated commissioning works