Waterco Europe
Commercial water treatment

London, United Kingdom



Prestigious UK water fountain specialist specifies Waterco

With rooftop views of London and Wembley Stadium, Canada Gardens is set to become one of the city's most coveted residential precincts.

Comprised of seven buildings and a podium garden, the development provides 743 residential apartments (303 of affordable tenure) as well as amenity space and ground floor uses.

Part of the impressive masterplan is a series of landscaped outdoor areas, designed for residents to meet, relax, exercise and play.

The project's main building contractor was Dublin-based <u>Sisk Group</u> while the various water features were sub-contracted to <u>Fountains Direct Limited</u>, one of the most successful companies of its type established in the United Kingdom.





"Waterco's range is terrific and the quality consistently high, which complements the other equipment we use," Nick Roberts explains.



The addition of the multicyclones removes up to 80% of the incoming dirt through its multiple hydrocyclones prior to the water entering the main filtration system.



Multiple SMD Commercial Filters and Multicyclones ensures the highest level of water quality for the various water features.

Public assets and play areas

Fountains Direct managing director Nick Roberts, who has specified Waterco for more than two decades, proposed five separate water features to complement the development's architectural character.

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Under the direction of project manager Paul Everdell and senior site manager Bartlomiej Bozek, the vision was to create focal points for communal areas with high-quality equipment and first-class design principles.

Fountain and play water feature – 33m³ volume of water

This area is essentially a dry splash pad, with a series of display nozzles to give a lively and interesting display for children to interact with.

Water is delivered to each of the nozzles via a manifold within a valve chamber. Water then drains through the central sump to a sac filter chamber which is designed to filter out large debris such as leaves and twigs. Once through the sac filter, water then travels via gravity to a below ground storage tank.

Water is drawn from the base of this storage tank to the main plant room where the water is then filtered, sterilised and treated with a sanitisation chemical before returning to a second 'clean water' underground reservoir. Two submersible pumps operate the children's splash area nozzles via a manifold and each nozzle has a valve which can be adjusted to vary the water height of each nozzle.

In winter the two children's splash area pumps are turned off and one central fountain display pump is turned on, creating a lively and full fountain display up to 5m in height in the centre of a flooded pool.

Waterco equipment includes:

- 2 x Micron SMD1200 commercial sand filters
- EcoPure Glass Media
- 4 x MC16 MultiCyclones
- 2 x 5.5HP Hydrostar pumps for the main water filtration
- 1 x 5.5HP Hydrostar pump for additional circulation



Two water feature cascade pools - 21m³ and 28m³ total water volume

The two intermediate pools are designed to link the top fountain and play area water feature with the main fountain pool, as it winds its way through the apartment buildings.

A Waterco 4HP Hydrostar pump is used on the two linked pools where filtered water is drawn from the main fountain pool and directed into the top cascading pool through three base inlets that are covered with stainless steel debris sieves. The water then flows to the lower cascade pool, via underground balance pipes, before returning back into the main fountain pool.

Main fountain pools – 330m³ total water volume

This large pool is positioned at the lowest point of the feature and one central fountain operates a jet of water to a height of 12m. The fountain is illuminated using three RGB colour change LED lights while the water is filtered and sterilised but not treated with chlorine.

The pool acts as an attenuation pool for the built area and during periods of heavy prolonged rainfall, if the stormwater attenuation tank system below the surface becomes flooded, any additional water will flow back through the storm water grilles, raising the water level in the pool. This will occur until such time that the rains stop, and the surface wastewater system can cope with the amount of water flowing through the system. At this point the water level will drop in the pool and back to its normal operating level.



Hydrostar Pumps to power the various water features including the main fountain pool and connecting features



Cascading features designed to link the water play area with the main fountain pool.

Suction sumps and skimmers draw water via a connected manifold to three dry sited filter pumps, where water is filtered through a series of Waterco MultiCyclone filters, sand filters and then UV sterilisers before returning to the pool via eight base delivery armatures. Three twin base suction sumps draw water to three dry sited circulation pumps. These deliver water directly to the cascade pool.

One underground reservoir containing submersible circulation pumps operate the roadside cascade. Water gently flows over two sides at a depth of approximately 10mm. White LED lights positioned every 1m along the length, illuminate the cascade during twilight hours.

One suction transition is cast into the reservoir. Dry sited filter pumps draw water from the reservoir and deliver it back to the reservoir via a filter system, UV steriliser and automatic pH and chlorine dosing system. Water in the cascade section of the feature is chlorinated.

Waterco equipment includes:

- 3 x Micron SMD1200 commercial sand filters
- EcoPure Glass Media
- 6 x MC16 MultiCyclone and 3 x 5.5HP Hydrostar pumps for the main water filtration
- 3 x 5.5HP Hydrostar pumps for the main pool cascade water feature

A separate system comprising of a Micron SMD1200 commercial sand filter, EcoPure Glass Media and a 5.5HP Hydrostar pump was installed for the roadside cascade pool.

Situated in the private grounds of Canada Gardens are two additional features that can be enjoyed exclusively by the residents within the podium area.





The decorative waterfall is located in the BBQ area of the private grounds for all the residents to enjoy.



Part of the impressive masterplan of Canada Gardens is a series of landscaped outdoor areas designed for residents to meet, relax, exercise including the children play pool.



The plantroom for the children's play pool and the cascading waterfall comprising of Micron filters, EcoPure Glass media, multicyclones and the Hydrostorm Pumps.

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A 7m cascading waterfall and pool – 4m³ total water volume

A decorative water feature within the private grounds is perfectly located in the BBQ area so that residents can sit down and relax whist enjoying a drink with friends and family. The feature comprises of a 500mm wide stainless-steel feature cascade, positioned approximately 1.2m above the water surface. Three white LED lights are installed within the sump cover grating illuminating the cascade when the feature is in operation.

The feature water is filtered and treated with a small amount of sanitisation chemicals, to ensure the water and surfaces are clear and free of algae.

Waterco equipment includes:

- 1 x Micron SM500 sand filter
- EcoPure Glass Media
- 1 x MC16 MultiCyclone and 1.0HP Hydrostorm pump

Children's play pool - 7m³ total water volume

Again, this is set in the stunning grounds of the apartments for children to paddle in and enjoy on warm summer days. There are various seating points located along the edge of the pool, for people to sit and enjoy the serenity. The paddling pool comes complete with three low bubbling jets and white LED lighting.

The filtration, circulation and water treatment plant is designed in accordance with PWTAG guidelines.

Waterco equipment includes:

- 1 x Micron SMD900 commercial sand filter
- EcoPure Glass Media
- 1 x MC16 MultiCyclone and a 3HP Hydrostorm pump for the filtration

The three fountain jets in the pool are powered by a separate 1.5HP Hydrostorm pump from Waterco.

Prestigious projects rely on Waterco

Waterco Europe CEO Tony Fisher says prestigious projects rely on high-quality filtration and circulation equipment to maintain public safety and a professional reputation.

"Peace of mind is needed when reputable companies like Fountains Direct attach their name to landmark developments like Canada Gardens," he explains. "Confidence in the supply, quality of the product and after sales service is reinforced with Waterco's 30-year plus manufacturing history and base in the UK."

