

Project Highlights

Project Name: Cascade Waterfall High Court Canberra

Equipment Supplied: Consult, Design, Supply & Commission of Main Water Feature Pump, Rain-water harvesting tank pump, Drain Pump, automatic backwash filter, Controller & accessories.



The water installation, Cascade Waterfall, softens the High Court's ceremonial approach ramp and forecourt area. The water feature cascades down the western side of the ceremonial ramp, and is made of South Australian speckled granite. Doyle Pump & Engineering were engaged to attend The High Court in Canberra to evaluate, report and provide pump system analysis on existing water feature pump. We were advised that there was an assessment plan to improve environmental/energy performance with intended expansion of services to include a rainwater harvesting system. As part of the consultation, Doyle Pump & Engineering provided a detailed report & assessment that included pump and system diagnostics and a proposal to engineer the water feature pump design, supply new equipment and provide on-site commissioning.

The Situation

The main water feature pump inlet pipe work was undersized, leading to increased system velocity & consequently increased wear on pipe & fitting components, and reduced pump service life. Furthermore the installation of the filter pump was one of the worst we had seen. There were several problems that restricted optimal pump operation. With the future expansion in mind, the existing pump & installation was undersized. The proposed rainwater harvesting transfer pump (designed by others) was reviewed within existing installation parameters.

The Recommendations & Solutions

- Redesign the new main water feature pump, to accommodate the flow rate requirement to manage the cascading water fall. The design also included a new drain pump, alternative pump offer for rainwater harvesting system, new automatic back flushing filter, new controller and engineered control logic.
- We recommended an alternative to the borehole pump (specified by others) for the rainwater harvesting system. Our proposal had superior benefits, with simplified maintenance and increased pump capabilities, including it's ability to handle debris and solids and operating at low tank water levels without sustaining pump damage and thus utilising more of the available water.
- Replace all existing inlet lines and replace with suitably sized pipes and valves as recommended.
- We recommended the removal of the existing filter pump and associated equipment to a new simplified automatic back flushing filter to be installed and integrated with the new main water feature pump.

The Outcome

As per recommended design, Doyle Pump & Engineering supplied & commissioned all recommended pumps, filter, controls and ancillary equipment. Further information about the design is available by contacting Doyle Pump & Engineering.



New Cascade Waterfall Pump –Pre-installation

