



Ja-Ela Waste Water Treatment Plant, Colombo, Sri Lanka

Project Features

The Ja-Ela Waste Water Treatment Plant was commissioned in September 2011, as the first high-tech activated sludge plant in Sri Lanka. With a process designed for removal of BOD, nitrogen and phosphorous, the plant receives industrial and municipal waste water from Ja-Ela, 20 km north of Colombo.

The implementation of Ja-Ela WWTP is part of the Sri Lankan National Water Supply and Drainage Board's ongoing programme; The Ratmalana/Moratuwa and Ja-Ela/Ekala wastewater disposal project, which was initiated in 2007. The project is financed by the Swedish International Development Agency (SIDA) and the treatment plants, dimensioned for 36 000 (Ja-Ela) and 100 000 (Ratmalana) person equivalents were designed by Purac. The total project also included 7 Pumping Stations and a Sewerage Network.

Ja-Ela, a northern suburb of Colombo, is a major industrial area, including textile/garments, chemical, metal finishing, food and asbestos factories. Prior to the commissioning of Ja-Ela WWTP, households in the area disposed domestic wastewater into septic tanks polluting the ground water and most industrial process and

cooling water was directed straight into ditches. Due to the lack of sewage infrastructure several water bodies were found to be heavily contaminated.

The project was implemented in co-operation with, Pihl & Søn AS, a Danish civil contractor.

The treatment is based on the activated sludge process, with pre-denitrification and phosphorous removal.

The plant is designed to fulfill the following outlet requirements and has succeeded to meet these restrictions with excellent margin:

BOD₅

- Mean value <3 mg/l
- Required value <25 mg/l

Total N

- Mean value 7.2 mg/l
- Required value <30 mg/l

COD

- Mean value <40 mg/l
- Required value <120 mg/l

Total P

- Mean value 1.2 mg/l
- Required value <5 mg/l