

LILONGWE WATER BOARD Third Lilongwe Water Board Supply Project

SUMMARY OF WORKS	
Type of Works	Extension to Water Treatment Plant
Location of Works	Lilongwe
Size of Works (Mℓ/D)	35 ML/D
Date of Award	1998
Date of Completion	2000
Completion Value (Including VAT)	R26,000,000
Client	Lilongwe Water Board
Conditions of Contract	GCC

The Lilongwe Water Board Supplies water to the City of Lilongwe. The source of water is from two reservoirs on the Lilongwe River. Water is released from these reservoirs at a controlled rate and this flow travels about 20km downstream to Lilongwe, where a small weir has been constructed to provide adequate water depth for the inlet structures to the two existing water treatment plants.

The original plant was constructed in 1966 and progressively extended to achieve a capacity of 35MI/day. The second plant, constructed in 1991 has a nominal capacity of 27MI/day with hydraulic overload capacity of 40MI/day. This particular plant has been operated consistently at rates up to 33MI/day, during periods of good raw water quality.

The water treatment plant extensions to augment the water supply from the Lilongwe Water Treatment Plant No 2, are sited adjacent to the existing plant. These extensions are provided with a branch from the existing intake pipeline.

The extensions, under this contract have a capacity of 27MI/day of treated water with a hydraulic overload capacity of 40MI/day. The plant has been designed to utilise the existing washing machinery.



FLAT BOTTOM CLARIFIERS IN OPERATION

Paterson Candy International (SA) (Pty) Ltd, trading as PCI Africa

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MAJOR ITEMS OF TREATMENT WORKS SUPPLIES

Clarification

Two PCI Flat Bed Clarifiers each measuring 22.5m x 10,66m with a surface area of 480m², having a nominal capacity of 625m³/hr at a rise rate of 3m/hr.

FLAT BOTTOM CLARIFIERS REFLECTING SLUDGE CONES



Filtration

Four Type "D" Filters, each measuring 4,19m x 8,1m with a filtering area of 159m² resulting in a nominal filtration a rate of 7,95m/hr. at a flow of 30M³/day.

Loss of Head Measurement

Electronic level sensors with audible alarms

Chemical Dosing

Primary Coagulant (Aluminium, Sulphate or Floccotan), Polyelectrolyte and Lime Dosing.
OSEC – (On site Electrolyte Chlorination Facilities).

Raw Water Metering

Measurements of the flow of Raw Water via an Electromagnetic Flow Meter