

T6.1 DESCRIPTION OF WORKS

1.0 Introduction and Background

The Eswatini Water Services Corporation has a long standing history in the provision of clear water services in urban and peri-urban areas.

The Eswatini Water Services Corporation now desires to install a new dewatering plant at Woodlands Treatment Plant and the new fire and chlorine detection system.

2 Scope of Works

The works includes the design, supply and installation as well as commissioning of a centrifuge mechanical sludge dewatering plant for the Woodlands Potable Water Treatment Plant. This also comprises provision of a storage area for the caked sludge before disposal. The filtrate has to be discharged back to the headworks for treatment.

The service provider may provide alternative suitable and cost effective proposals for mechanical sludge dewatering and may be considered for this project.

Technical Specifications

Any work considered necessary by the supplier for successful completion of the work but not mentioned in the Tender, is required to be considered suitable against the relevant item of Schedule of Quantities Codes & Standards.

All materials, equipment and accessories used in the manufacture shall conform to the latest editions of relevant Standards including amendments and addenda.

DESIGN PARAMETERS – SPECIFICATION

- Water Treatment Plant design capacity: **870m³/hr.**
- Highest Total Suspended Solids (TSS): **120 mg/L**
- Highest Annual Turbidity: **150 NTU**
- Maximum Alum dosage: **15 ppm**
- Filter type: **Rapid Sand Filters**
- Filter Backwash Rate: **At least 3 times a day**

NB: Sludge Plant to handle effluent from clarifiers as well as backwash wastewater from Rapid Sand filters.

Performance Criteria/Employers Requirements

- Cake yield: > **1.5 kg/m².h**
- Solid recovery: > **90%**
- Filtrate suspended solids: < **20 mg/L**
- Dry-solids moisture content: < **40%**