

# DEWATS FOR POSITIVE PACKAGING, BANGALORE

## PROJECT BRIEF

Positive Packaging is a one-stop source for printed and laminated barrier-grade quality flexible packaging materials. The Company caters to various sectors including Food & Beverages, FMCG, Pharmaceutical, Industrial and Agro, encompassing the world's most recognized brands. The Corporate office with industry is located in Bommasandra Industrial Estate, Bangalore. There are 100 employees working in the office in 3 shifts. There are two units of same staff strength in the campus. The DEWATS has been implemented in the both units.

## PROJECT OUTCOMES

- To ensure wastewater is being disposed off safely in compliance with safety standards
- To reuse treated wastewater for gardening purposes and conserve fresh water.

## SYSTEM IN BRIEF

The wastewater streams are channeled from the toilets, bathroom, urinals and canteen and collected in a common collection tank with a sludge cutter pump inside. The treatment system consists of an integrated prefabricated Settler and Anaerobic Baffle Reactor, followed by Planted Gravel Filter and Collection Tank where water is stored.

- **The Settler:** is a sedimentation tank for retaining particles by settling over a specific time frame.
- **The Anaerobic Baffle Reactor:** ensures anaerobic degradation of suspended and dissolved solids by mixing fresh wastewater with an active sludge blanket.
- **The Planted Gravel Filter:** is used as a tertiary treatment unit where aerobic and facultative degradation of dissolved organic matter occurs.

## SALIENT FEATURES (of each)

**Source:** Toilets, bathrooms, urinals and Canteen

**Design capacity:** 7.5 m<sup>3</sup>/day

**No of users:** 100

**Peak flow:** 8 hours

**Influent quality:** BOD 200 mg/l  
COD 600 mg/l

**Effluent quality:** BOD 30 mg/l  
COD 150 mg/l

**Efficiency:** 98%

**Status:** Operational

## PROJECT SPECIFICATIONS:

**Kind of Project:** SME-DEWATS for Domestic Wastewater

**Implementing Agency:** L& S Architects

**Supporting Organization:** CDD Society

**Construction Period:** 2 months

**Start of Operation:** 2013 & 2014

## MODULES ADOPTED

**Integrated Settler + Anaerobic Baffle Reactor**

Volume: 7.5 m<sup>3</sup>

No. of Settler chambers: 2

No of ABR Chambers: 5

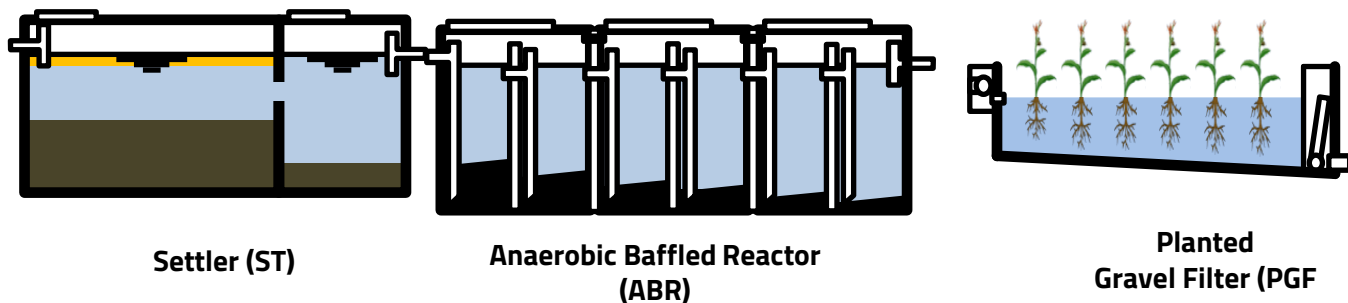
**Planted Gravel Filter**

Plants to be used: Reed Juncas, Colocasia

**Collection Tank**

Volume: 2 m<sup>3</sup>

## PROCESS FLOW DIAGRAM



## OPERATION AND MAINTENANCE

The wastewater treatment plant is operated and maintained by a trained operator.

### Regular Maintenance:

- Wastewater flow checking in all units and clearing the blockages in all chambers (registers)
- Regular operation of pumps

### Periodical Maintenance:

- Removal of sludge from the settler once in a year and from the Anaerobic Baffle Reactor once in 2-3 years.
- Trimming of plants in the Planted Gravel Filter
- Replacement of filter media in Anaerobic Filter once in five years
- Cleaning of the Planted Gravel Filter media once in 5 years

## REUSE OPTIONS

- The treated wastewater is disposed into the drain.

## PERFORMANCE OF DEWATS

Sample points	COD, mg/l	BOD mg/l	TSS mg/l
<b>Positive Labels 1 - Date of sampling: 30/04/2015</b>			
Inlet Settler	257	81	36
Outlet ABR	144	39	24
Outlet PGF	76	20	16
<b>Positive Labels 2 - Date of sampling: 03/09/2015</b>			
Inlet Settler	223	105	N/A
Outlet ABR	156	72	N/A
Outlet PGF	95	30	N/A