

2.9 SOIL / WASTE DISPOSAL

Double stack system is proposed for sewage and sullage up to the first manhole based on conventional water carriage method under gravitational flow shall be designed to take the sewage to STP. However with single stack system of 125mm dia pipe can be catered for both soil and waste in PP pipe system, which can reduce the cost and space inside the plumbing shaft.

2.10 SEWAGE TREATMENT PLANT

It is proposed to provide sewage treatment plant of approx. 540 KLD for housing for treatment of sullage water & sewage. The treated effluent shall be of a quality suitable for use as flushing.

Following parameters shall be adopted for the design of sewage treatment plant. Parameters for design of sewage treatment plant as follow:

Parameters	V a l u e	
	Before Treatment	After Treatment
Ph	7.5 – 8.5	6.0 - 8.5
BOD	300 - 500 Mg/L	Less than 5 Mg/L
Suspended Solids	250 - 450 Mg/L	Less than 5 Mg/L
COD	600 - 800 Mg/L	Less than 10 Mg/L
Oil & Grease	50 - 100 Mg/L	NIL
Detergents	50 - 100 Mg/L	NIL

Treated water shall be stored in treated water tanks and shall be supplied through hydro pneumatic pumps system for flushing / gardening water requirement.

2.11 PROCESS DESCRIPTION

The principle of the filtration for the flat sheet type submerged membrane. Activated sludge in the aeration tank is clearly removed by the flat sheet type submerged membrane. The membrane module consists of housing, aeration diffuser; permeate water manifold and membrane elements. The membrane element consisting of flat sheet membranes sandwiching a support panel is set up vertically. Feed water including activated sludge is filtrated by flat sheet membranes with pore size of 0.1 micron meter. The air bubbles supplied from the bottom of the membrane elements continuously scour off cake of activated sludge accumulated on the membrane surface. This is continuous filtration operation. The air bubbles are also used for the biological reaction to decompose organic substances included in the raw sewage.

MBBR MODULE

The material of the membrane is PVDF (Poly vinylidene fluoride). PVDF is fluorine polymer, which has high stability for chemicals and good physical strength. The form of membrane is fibre reinforced flat sheet membrane. The membrane has small and uniform pore size. Therefore, the rejection property of this membrane is excellent. Almost all particles with sizes more than 0.1 micron meter can be removed effectively using this membrane.