Project Report Of

THE ICONIC RESIDENCES

GURUGRAM

By

M/s Signatureglobal Homes Ltd.

BRIEF DETAILS OF THE PROJECT

1.	**Name of the project**	**THE ICONIC RESIDENCES GURUGRAM**
2.	**Name of the promoter/applicant**	Signatureglobal Homes Pvt. Ltd.
3.	**Total licensed area of the project**	**60.511 acres**
4.	**Location of the project**	Village- Gadauli Kalan Distt.Gurugram, Haryana
5.	**Registered address**	13th Floor , Dr.Gopal das Bhawan, 28 Barakhambha Road, New Delhi-110001
6.	**Status of the project**	New
7.	**Nature of the project**	Group Housing colony
8.	**Planning area**	GMUMC 2031
9.	**Type of zone**	Hyper potential Zone
10.	**Web address of the project on the website of the promoter**	www.signatureglobal.in
11.	**Email address for communication regarding Project**	compliance@signatureglobal.in
12.	**Area applied for registration**	2.303 Acres
13.	**Date of very first license of the project**	33 OF 2008 Dated 19/02/2008 Renewed and Valid up to 18/02/2030

DETAILS OF PROJECT COST

S.NO	DETAILS	AMOUNT
1.	**Land cost as per registration**	3,504.71
2.	**Conversion charges**	-
3.	**License fee**	-
4.	**External Development Charges (as per LOI)**	764.50
5.	**Internal Development Works**	449.80
6.	**Cost of construction**	31,817.48
7.	**Other Cost**	15,199.68
	Total Cost	**50,971.67**

Revenue from Project Amt (Lacs)

Component	Average Rate	Area	Estimated sale proceeds
Appartment	**Rs. 35910.24/sqft**	**195810.71/sq.ft**	**70,316.10**
Balcony	**-**	**-**	**-**
Commercial	**-**	**-**	**-**
Estimated total sale proceeds		**70,316.10**	
Total Cost		**50,971.67**	
Return from the project		**19,344.43**	

INTRODUCTION

M/s Signatureglobal Homes Ltd. (the Developer/Promoter) has entered into a Joint Development Agreement (JDA) with M/s Ramprastha Promoters & Developers Pvt. Ltd., acting on behalf of the landowners, for the development of a land parcel measuring 2.303 acres, part of landholding measuring 60.51 acres. Subsequently, the Developer obtained Beneficial Interest Permission in favour of the promoter from the Department of Town and Country Planning (DTCP), Haryana, vide Endst. No. LC-1608-V-JE(SK)-2024/40939 dated 23.12.2024. This permission authorizes M/s Signatureglobal Homes Ltd. to undertake the proposed development activities on the aforesaid
land.).

The project facilities include:

- Dwelling Units (116 nos.)
- Podium (3 nos.)
- Basement (1 nos.)
- Community Block.
- Swimming Pool.

S.No.	Typology	No. of Units (A)	Carpet (B)	
			(Sq.m.)	(Sq.ft.)
1	4.5 BHK (2nd Floor - 27th Floor)	52	165.183	1778.030
2	3.5 BHK (2nd Floor - 31st Floor)	57	139.736	1504.118
3	Penthouse -1 (28th and 29th Floor)	2	303.404	3265.841
4	Penthouse -2 (30th, 31st, terrace)	2	321.373	3459.259
5	3.5 BHK(W/O Utility) (13th, 21st & 30th Floor)	3	129.079	1389.406
TOTAL		116		

SITE LOCATION AND SURROUNDINGS

The project site is located at sector 37D, Gurugram, Haryana The geographical co-ordinates of the centre of project site are 28°27'2.57"N & 76°57'47.15"E.

CONNECTIVITY

The project site is well connected by 12.0 m wide road.

Dwarka Expressway is approx. 0.05 km in W direction and Ramprastha Primera Road is approx. 0.1 km in SW direction. The nearest railway station is Basai Dhankot Railway Station approx. 2.4 km in ENE direction from the project site and IGI Airport is at a distance of approx. 14.7 km in NE direction from the project site.

500 m radius google map is presented below in Fig. 1.

SoI toposheet depicting 10 km radius around project site is shown below in Fig. 2.

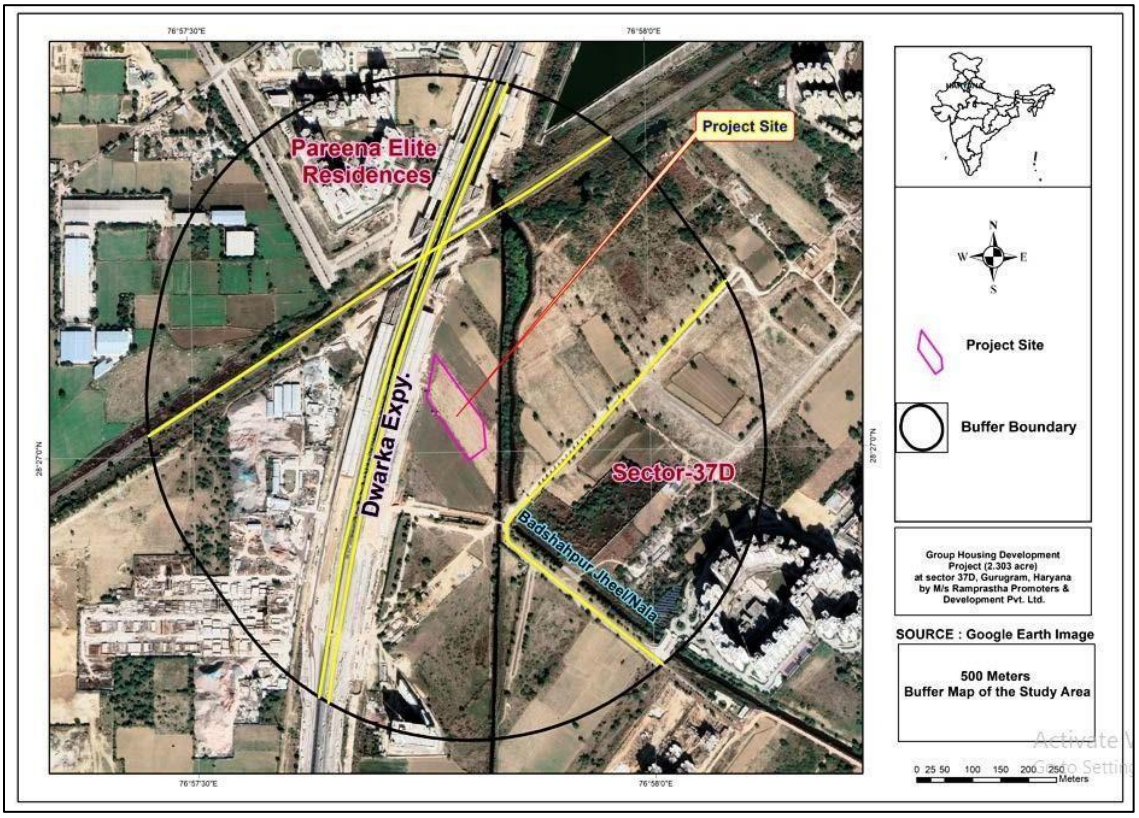


Figure 1: 500 m radius map

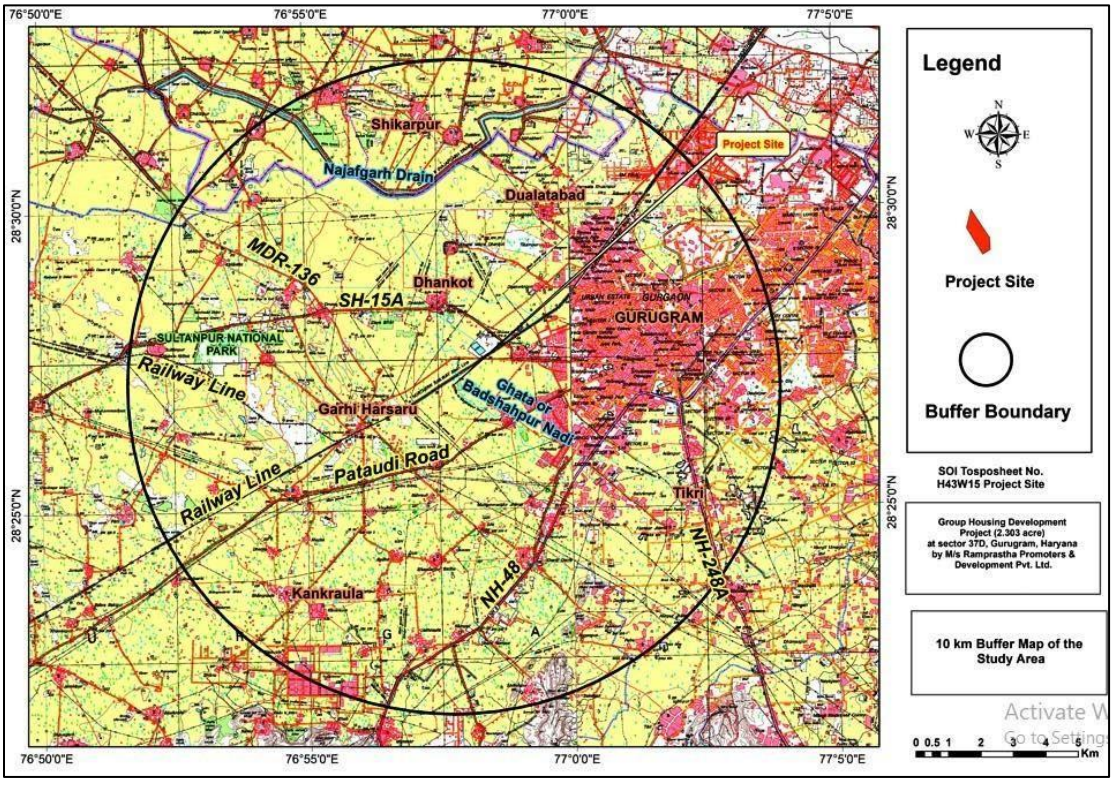


Fig. 2: SoI Toposheet showing 10 km radius

TOTAL COST OF THE PROJECT

Total Cost of the proposed project will be 509.71 Crore**.**

AREA STATEMENT

The plot area is 9319.91 SQ. M (2.303 Acres). The detailed area statement and built-up area break-up is given below in Table 1&2 respectively.

Table 1: Detailed Area Statement

S. No.	PARTICULARS	AREA (SQ.M.)
1	Plot area	9319.91
2.	Ground coverage (35% of 239636.72 Sq. mtr)	4931.410
3.	FAR	26634.544
4.	Built up area	51602.147

POPULATION DENSITY

The total estimated population of the project is **940** persons (including Residents + staff + visitors). The detailed population break-up is as given below in Table no.3.

Table 3: Population Break-up

S. No.	Description	DUs/Area in sq.m.	PPU	Total Population
A. Residential				
1.	Main Units			
	4.5 BHK	52	7	364
	3.5 BHK	57	6	342
	3.5 BHK (Without Utility)	3	6	18
	Penthouse -1 (28th and 29th Floor) ,Penthouse - 2 (30th, 31st, terrace)	4	7	28
	Total Residents			**752**
2.	Maintenance Staff	5% of residential population		38
3.	Visitors	10 % of residential population		75
B.	**Club house/Community Centre**	**10% of residential population**		**75**
5.	Club staff	10 % of club house/Community Centre population.		8
6.	Visitors	90 % of club house/Community Centre population.		67
Total Population				**940**

WATER REQUIREMENT

During operation phase, the source of water supply will be GMDA. The total water requirement for the project will be approx. 79 KLD out of which domestic water demand is 69 KLD. The fresh water requirement will be 53 KLD. The water calculation is given below in Table 4 & 5

Table 4: Calculations for Daily Water Demand

S. No.	Description	Occupancy	Rate of water demand (lpcd)		Total Water Requirement (KLD)		
A.	**Domestic Water**		**Fresh**	**Flushing**	**Fresh**	**Flushing**	**Total**
	• Residents	752	65	21	48.88	15.792	**64.67**
	• Staff	46	25	20	1.15	0.92	**2.07**
	• Visitors	142	5	10	0.71	1.42	**2.13**

					50.74 Say 51 KLD	**18.132 Say 18 KLD**	**68.87 Say 69 KLD**
Total Domestic Water = 69 KLD							
B.	**Horticulture**	2504.4 m^2	3 l/sqm		7.5132 KLD **say 8 KLD**		
C.	**Swimming Pool**				**2 KLD**		
Grand Total (A+B+C+D) = 79 KLD							

Table 5: Wastewater Calculations

Total Domestic Water Requirement	**84 KLD**
Fresh	51 KLD
Flushing	18 KLD
Waste water [@80% fresh + 100% flushing)	40.8+18= 58.8 KLD Say 59 KLD
STP Capacity	**70 KLD**

The water balance diagrams for different seasons are shown below:

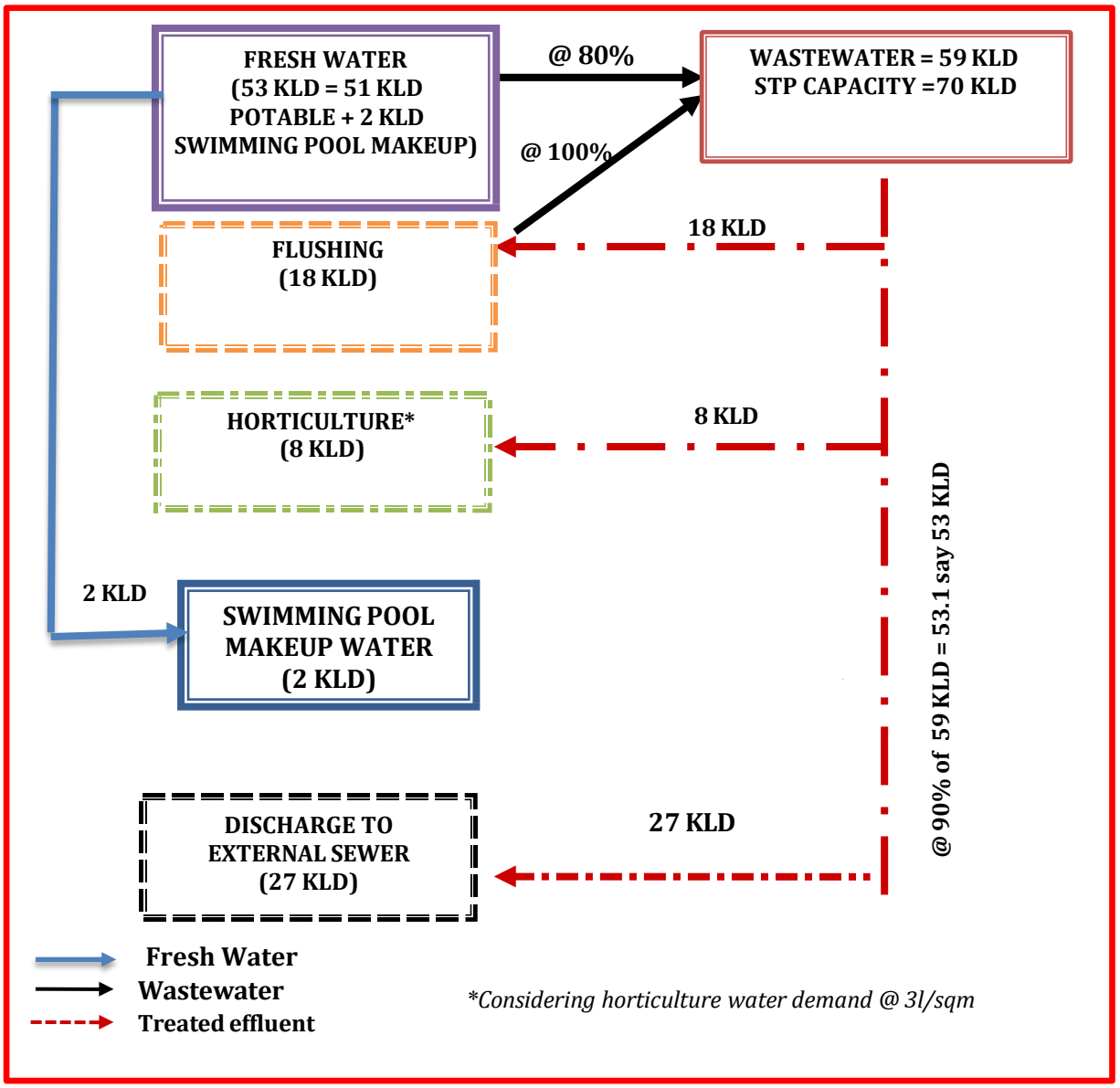


Figure 3: Water Balance Diagram (Summer Season)

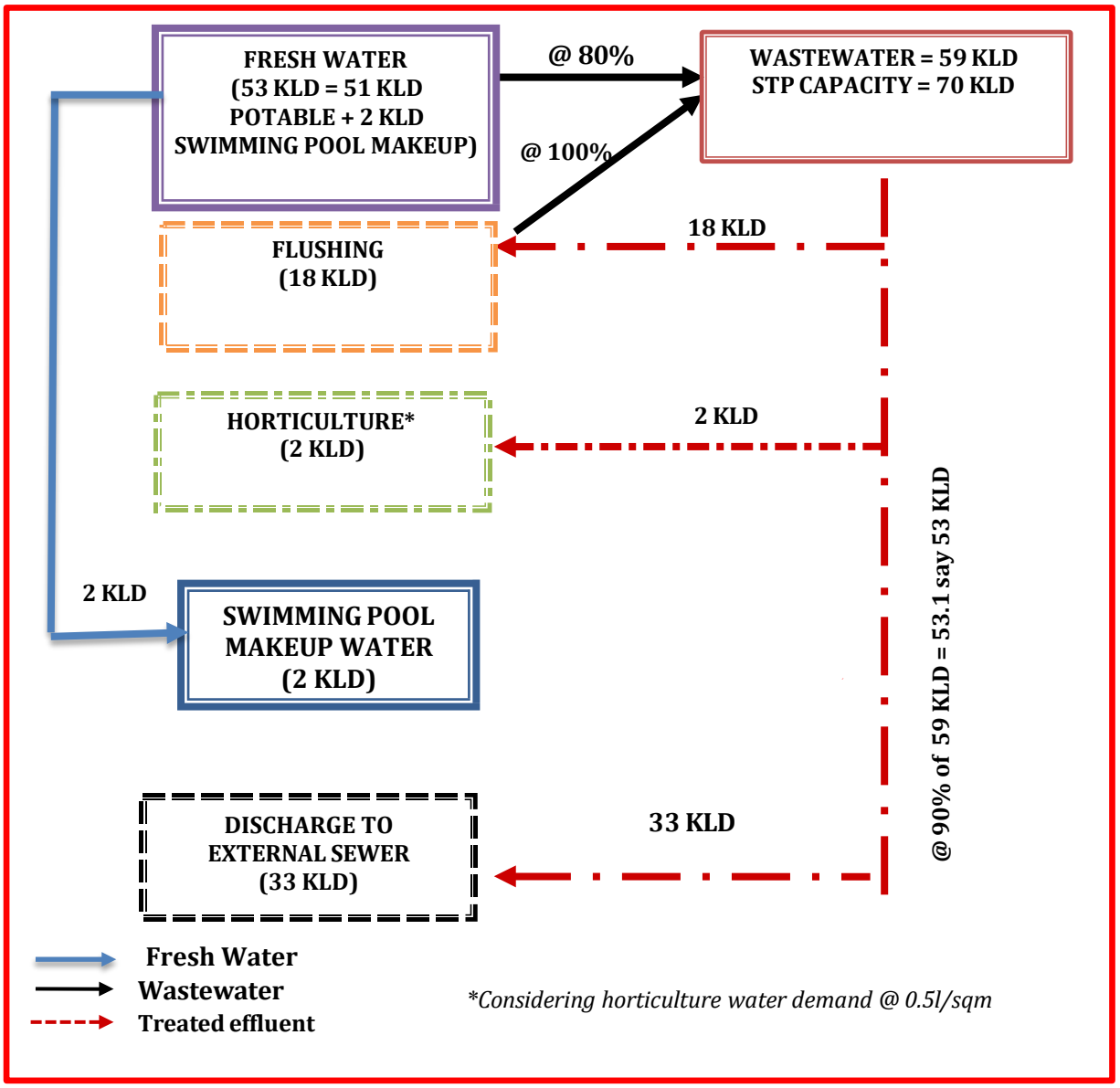


Figure 4: Water Balance Diagram (Monsoon Season)

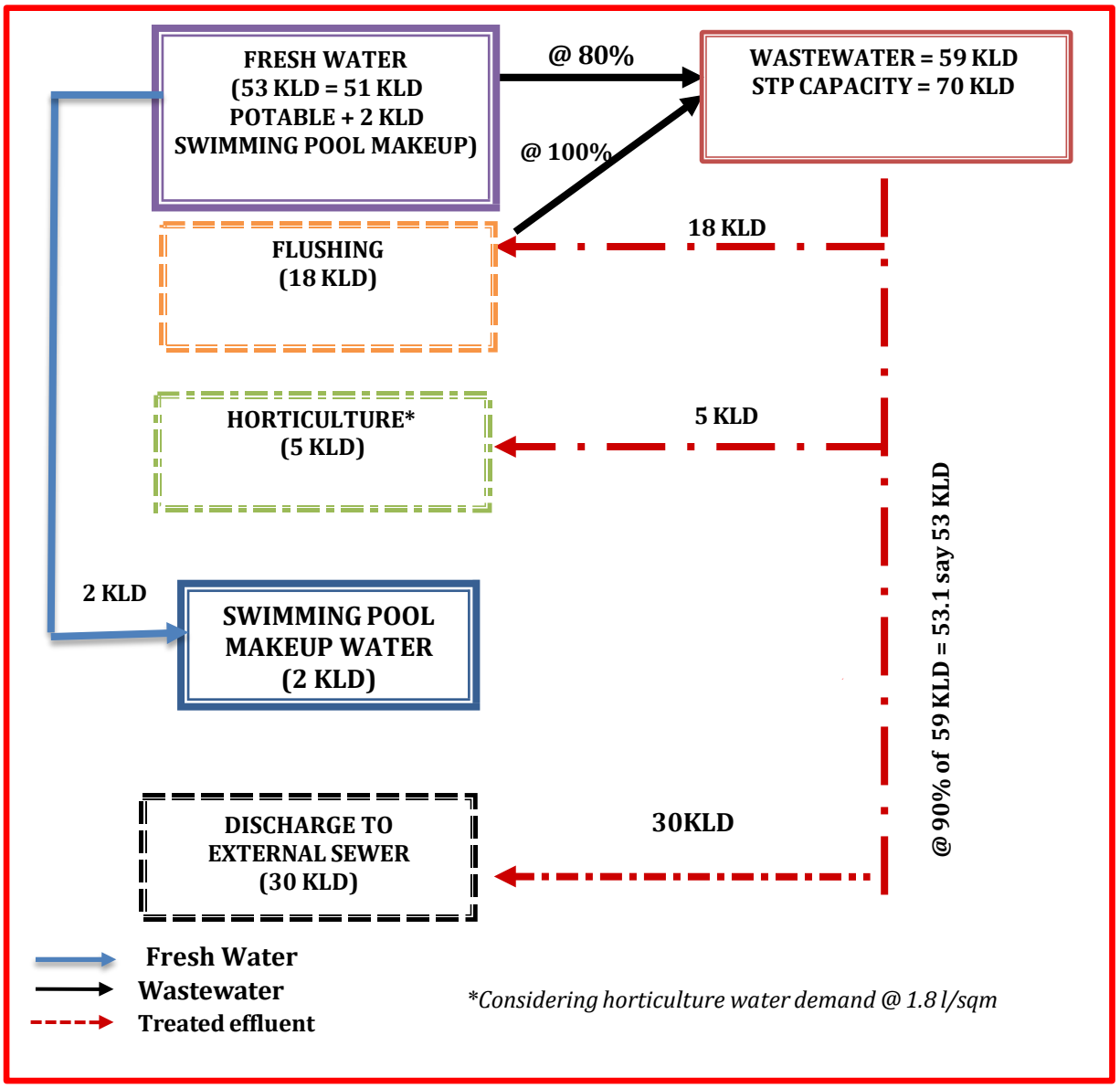


Figure 5: Water Balance Diagram (Winter Season)

Wastewater Generation & Treatment

It is expected that the project will generate approx. 59 KLD of wastewater. The wastewater will be treated in an onsite STP of 70 KLD capacity. The treated effluent will be reused for Flushing, Horticulture and Filter Backwash. Surplus treated effluent will be discharged to external sewer with due permission of Development Authority.

SEWAGE TREATMENT TECHNOLOGY

MBBR TECHNOLOGY

An external sewage network shall collect the sewage from all units, and flow by gravity to the sewage treatment plant.

Following are the benefits of providing the Sewage Treatment Plant in the present circumstances:

- The process has long retention time and can absorb shock load situation.
- Reduced net daily water requirements, source for Flushing and Horticultural purposes by utilization of the treated waste water.
- Reduced dependence on the public utilities for water supply and sewerage systems.
- The process produces a well-oxidized sludge in small quantities only, which can be removed and used as manure.

a. Wastewater Details

(a)	Daily load	:	59 KLD Waste Water
(b)	Duration of flow to STP	:	24 hours
(c)	Temperature	:	Maximum 32^{o}C
(d)	pH	:	6.5-8.5
(e)	Colour	:	Mild
(f)	T.S.S. (mg/l)	:	250-400 mg/l
(g)	BOD_5 (mg/l)	:	300-400 mg/l
(h)	COD (mg/l)	:	600-700 mg/l

b. Treated effluent

(a)	pH	:	6.0 to 8.5
(b)	B.O.D.	:	<10 mg/l
(c)	C.O.D.	:	<30 mg/l
(d)	Total Suspended Solids	:	<10mg/

c. Treatment Technology

MBBR TECHNOLOGY

Moving bed biofilm reactor technology is based on the principle of attached growth process. Raw sewage will be collected under gravity into the equalization tank after allowing to pass through the bar screen. Screens will be provided in screen chambers and it will be manually cleaned by going down to a platform. The bar screen, by removing coarse solids from the sewage help in protecting the raw sewage pump.

Fully submersible centrifugal non clog sewage handling pump will be provided in the collection cum equalization tank to pump the collected waste water to the next MBBR tanks. Automatic level controller will be provided in the tank to turn the pump off at the low water

level in the tank and to start the pump when water level is high automatically. Air will be introduced in this tank to prevent any potential foul smell problem & to provide the mixing of wastewater to avoid the sedimentation of solids in this tank. Air Grid used for aeration purpose shall be non-clog.

The sewage collected in equalization tank is pumped the moving bed bioreactor. There shall be two nos. of bioreactors in series for the efficient working and removal of BODs for the required retention time. The process inside the moving bed bioreactors consists of adding small cylindrical-shaped polyethylene/polypropylene carrier elements in aerated basins to support biofilm growth. The small cylinders are provided with a cross inside the cylinder and longitudinal fins on the outside. The biofilm carriers are maintained in the reactor by the use of a perforated plate with appropriate slot at the tank outlet. Air agitation or mixers are applied in a manner to continuously circulate the packing. The packing may fill 25 to 50 percent of the tank volume. Specific surface area of the packing is about 450-500 m^2/m^3 of bulk packing volume. The waste water from first bioreactor flows by gravity through the perforated plate/mesh to the next bioreactor kept in series. Inside the bioreactors, aerobic bacteria grow in an attached growth from around the moving plastic media inside the reactors. The bacteria have to reduce BOD & COD of waste water in the presence of oxygen provided through the air grids located at the bottom of the reactors. The Process does not require any return activated sludge flow or backwashing.

From the bio-reactors, the effluent passes by gravity into the clarifier (Tube Settling Tank). Clarifier will be a hopper bottom sedimentation tank provided with appropriate size PVC tube deck media. The suspended solids will settle at the bottom of the tank & clear supernatant will overflow to filter feed tank through outlet launder. The collected sludge at bottom shall be transferred through pumps to sludge holding tank.

The clear supernatant after clarifier will be collected in to filter feed tank. This tank will act as housing tank for filter feed pumps. The clarified & dis-infected water will be then fed to filtration unit.

Filtration unit consisting of Dual Media sand filter, activated carbon filter and ultra-filtration system (optional) will remove the residual impurities such as odor/color, suspended solids, BOD/COD. The treated water after the filtration unit will be collected in Irrigation cum Flushing water storage tank from where it is transferred to flushing water tank at terrace & Irrigation System.

Excess sludge from the bottom of the settling tank will be removed and transferred to sludge holding tank. Air grid shall be provided in this tank to avoid conversion into anaerobic conditions, thickening of sludge and keep sludge in homogenous condition. The digested & thickened sludge shall be further thickened through Sludge Dewatering System (Filter press with screw pump) and disposed-off periodically through closed tanker or can be reused as manure.

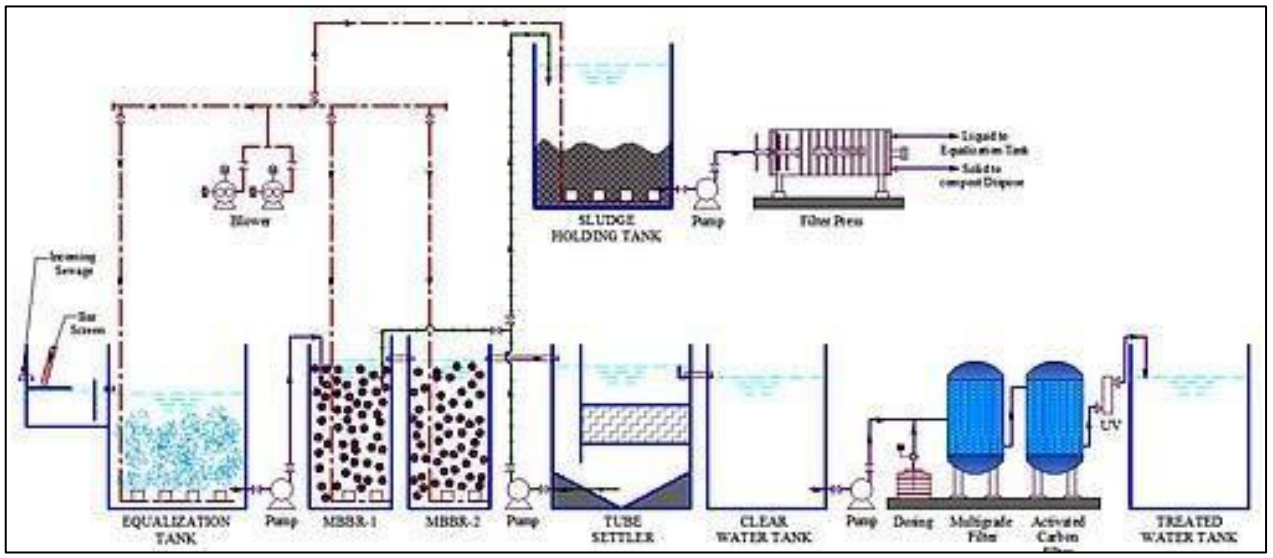


Figure 6: Schematic Diagrams for STP Based on MBBR Technology

d. Sewer System

The alignment and slope of the sewer line will follow the road network, drains or natural ground surface and will be connected to the trunk sewers. The discharge point will be a treatment plant, a pumping station, a water course or an intercepting sewer.

Pumping stations would be provided at places where the natural slope of the terrain is insufficient to permit gravity flow or the cost of excavation is uneconomical to do the same.

RAIN WATER HARVESTING

The storm water collection system for the premises shall be self-sufficient to avoid any collection/stagnation and flooding of water. The amount of storm water run-off depends upon many factors such as intensity and duration of precipitation, characteristics of the tributary area and the time required for such flow to reach the drains. The drains shall be located near the carriage way along either side of the roads. Taking the advantage of road camber, the rainfall run off from roads shall flow towards the drains. Storm water from various plots/shall be connected to adjacent drain by a pipe through catch basins. Therefore,

it has been calculated to provide 1 rainwater collection tank at selected locations, which will catch the maximum run-off from the site.

1) Since the existing topography is congenial to surface disposal, a network of storm water pipe drains is planned adjacent to roads. All building roof water will be brought down through rain water pipes.
2) Proposed storm water system consists of pipe drain, catch basins and seepage pits at regular intervals for rain water harvesting and ground water recharging.
3) The peak hourly rainfall of 90 mm/hr shall be considered for designing the storm water drainage system.

Rain water harvesting has been catered to and designed as per the guideline of CGWA. Peak hourly rainfall has been considered as 90 mm/hr. The rainwater collection tanks having 6m, 4.5m and 4.5m is constructed for recharging the water. Inside the recharge pit, a recharge bore is constructed having adequate diameter and depth. Design specifications of the rain water harvesting plan are as follows:

- Catchments/roofs would be accessible for regular cleaning.
- The roof will have smooth, hard and dense surface which is less likely to be damaged allowing release of material into the water. Roof painting has been avoided since most paints contain toxic substances and may peel off.
- All gutter ends will be fitted with a wire mesh screen and a first flush device would be installed. Most of the debris carried by the water from the rooftop like leaves, plastic bags and paper pieces will get arrested by the mesh at the terrace outlet and to prevent contamination by ensuring that the runoff from the first 20 minutes of rainfall is flushed off.
- No sewage or wastewater would be admitted into the system.
- No wastewater from areas likely to have oil, grease, or other pollutants has been connected to the system.

Calculations for storm water load:

Plot Area = 9,319.91 m^2

Roof-top area = Ground Coverage = 5,075.519 m^2

Runoff Load

Total Runoff Load (roof top area) = 5,075.519 × 0.09 × 0.9

= 457.697 m^3/hr

Taking 20 minutes retention time;

457.697/4 m^3/hr = 114.42425 m^3/hr

Taking the effective length width and depth of a tank 6m, 4.5m and 4.5m respectively,

Volume of a single collection tank= lxbxh = 6x4.5x4.5 = 121.5 m^3

Total 1 no. of collection tank proposed for artificial ground water recharge

PARKING FACILITIES

Adequate provision will be made for car/vehicle parking at the project site. There shall also be adequate parking provisions for visitors so as not to disturb the traffic and allow smooth movement at the site.

Parking Required:

Parking Proposed:

a. Basement = 73

b. Stilt = 252

TOTAL PARKING PROPOSED = 325

POWER REQUIREMENT

The power supply will be supplied by Dakshin Haryana Bijli Vitran Nigam (DHBVN). The total maximum demand is estimated as 1828.36 KW

POWER BACK-UP

There is provision of 3 nos. of DG sets (1 No. x 250 kVA + 1 No. x 500 kVA + 1 No. x 1010 kVA) for power back up. The DG sets will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper dispersion.

SOLID WASTE GENERATION

Solid waste would be generated both during the construction as well as operation phase. The solid waste expected to be generated during the construction phase will comprise of excavated materials, used bags, bricks, concrete, MS rods, tiles, wood etc. The following steps are proposed to be followed for the management solid waste:

- Construction yards are proposed for storage of construction materials.
- The excavated material such as topsoil and stones will be stacked for reuse during later stages of construction
- Excavated top soil will be stored in temporary constructed soil bank and will be reused for landscaping of the group housing project.
- Remaining soil will be utilized for refilling / road work / rising of site level at locations/ selling to outside agency for construction of roads etc.

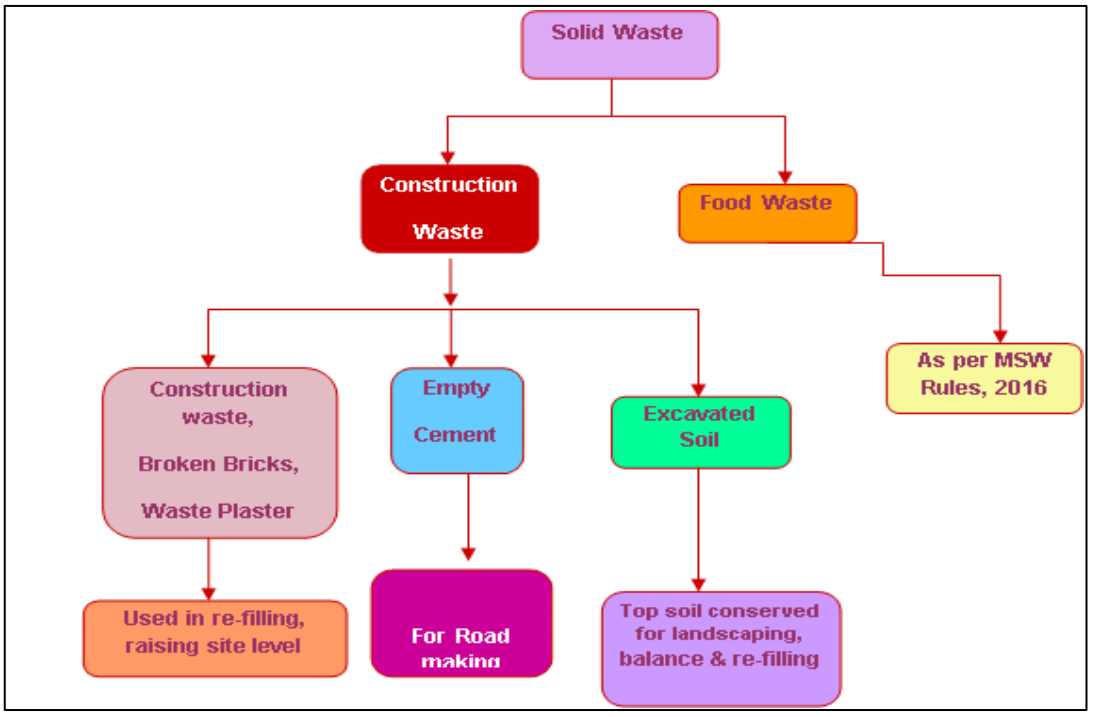


Figure 8: Solid Waste Management Scheme (Construction Phase)

During the operation phase, approx. 2,309 kg/day (@ 0.5 kg per capita per day for residents, @ 0.15 kg per capita per day for the visitor, 0.3 kg per capita per day for the staff and landscape waste @ 0.2 kg/acre/day).

Table 6: Calculation of Solid Waste

S. No.	Category	Norms (Kg/capita/day)	Waste generated (kg/day)

S. No.	Category	Norms (Kg/capita/day)	Waste generated (kg/day)
1.	Residents (752)	@ 0.5 kg/day	376
2.	Staff (46)	@ 0.3 kg/day	13.8
3.	Visitors (142)	@ 0.15 kg/day	21.3
4.	Landscape waste (0.619 acre)	@ 0.2 kg/acre/day	0.124
5.	STP sludge	Waste water x 0.35 x B.O.D difference/1000	8.05
	TOTAL SOLID WASTE		**419.27 Say 420 kg/day**

Following arrangements will be made at the site in accordance to Solid Waste Management Rules, 2016:

Collection and Segregation of waste:

- A door to door collection system will be provided for collection of domestic waste in colored bins from household units.
- Local vendor will be hired to provide separate colored bins for dry recyclable and Bio-Degradable waste.
- For waste collection, adequate number of colored bins (Green, Blue & dark grey bins separate for Bio-degradable and Non Bio-degradable) are proposed to be provided at the strategic locations of the area.
- Litter bins will also be provided in open areas like parks etc.

Treatment of waste:

Bio-Degradable waste

- Bio-degradable waste will be subjected to composting by the use of organic waste converter and the compost will be used as manure.
- STP sludge is proposed to be used for horticultural purposes as manure.
- Horticultural Waste is proposed to be composted and will be used for gardening purposes.

Recyclable waste

Grass Recycling – The cropped grass will be spread on the green area. It will act as manure after decomposition. Recyclable wastes like paper, plastic, metals etc. will be sold off to recyclers.

Disposal:

Recyclable and non-recyclable wastes will be disposed through local approved agency. Solid waste management Scheme for Operation Phase is depicted in the following figure.

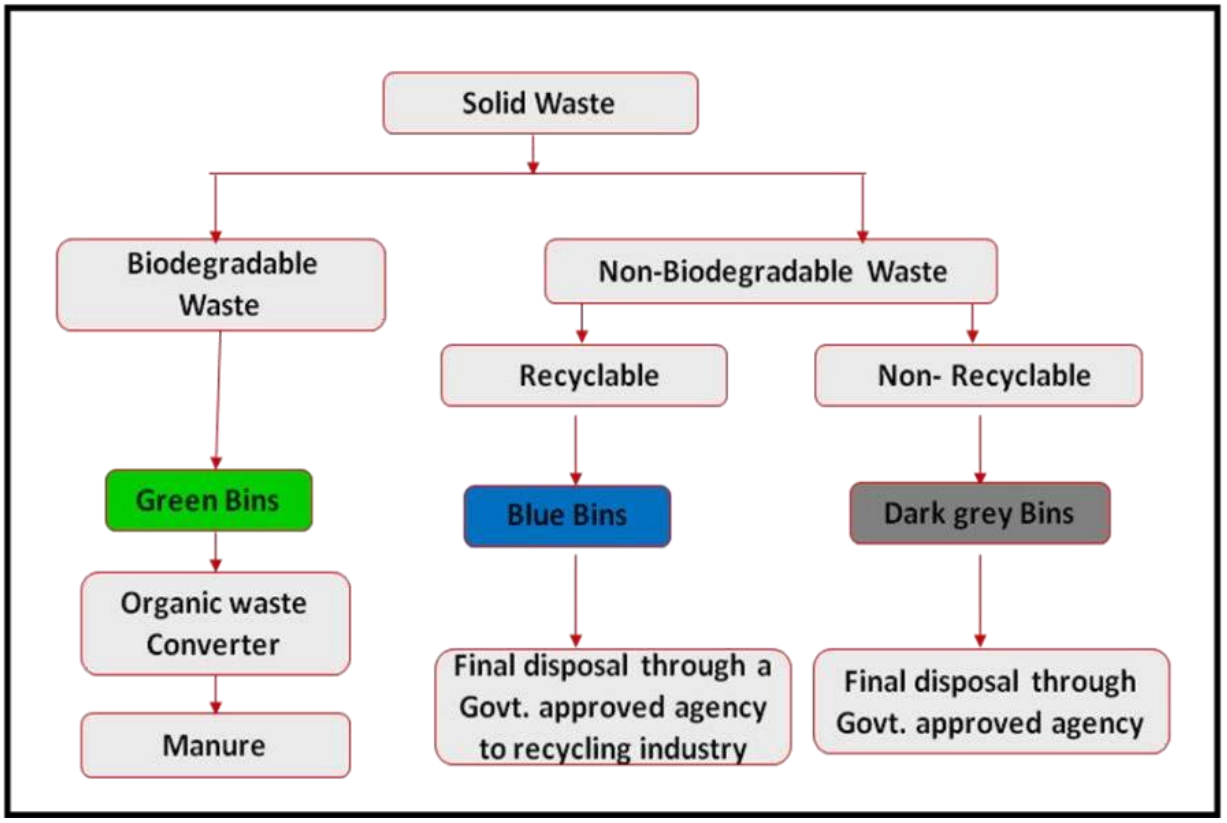


Figure 9: Solid Waste Management Scheme (Operation Phase)

Organic Waste Converter

A waste converter is a machine used for the treatment and recycling of solid and liquid refuse material. A converter is a self-contained system capable of performing the following functions: pasteurization of organic waste; sterilization of pathogenic or biohazard waste; grinding and pulverization of refuse into unrecognizable output; trash compaction; dehydration.

Benefits of organic waste converter:

1. Large quantity of solid waste is converted to manure in a very short period
2. Manures can be sold as compost to farmers, or used for gardening

3. Machine requires less space and the efficiency is high
4. Manpower and maintenance is very less
5. This is one of the latest techniques of managing solid waste

Operation cost of OWC:

Organic Waste Converter - 300 (Dim. 3m × 4m) is proposed to be used for composting waste 120 kg/batch or 3000 kg/day & it requires electricity of about 13.5 HP.

No. of batches /day = 3,000/120 = 25

No. of batches to convert 252 kg/day (60% of biodegradable waste)

Taking 20% higher to convert=252/120 = 2.1batches say 3 batches

Monthly Operation Cost-per capita:

The operating cost of OWC - 300 = 1, 80,000 INR/month

Cost/day = 1, 80,000/30

= 6,000/-

1 batch/day cost = 6,000/25

= 240 INR

Cost for 3 batch/day = 3 × 240/-

= 720/-

Monthly operating cost = 30 × 720

= Rs. 21,600/- per month

Total Residents of the project = 752

Per capita cost/month = Monthly operating cost/Residential population of the project (i.e. 2490)

= 21,600/ 752

= INR 28.7/resident/month Say INR 29 /resident/month

Area proposed for SWM = 45 m^2.



Figure 10: Organic Waste Convertor

GREEN AREA

Total green area measures 2,504.398 m^2 i.e. (26.87 % of plot area).

Evergreen tall and ornamental trees have been proposed to be planted inside the premises.

The list of trees/plants to be planted is given below in Table 7.

No. of trees required = 1 tree/80 sq.m. of plot area =2,504.398 /80 = 31.30 say 32 Nos.

Total no. of trees proposed = **40**

Table 7: List of Proposed Plantation

ROADSIDE & PERIPHERAL PLANTATION		
S. No.	**Botanical Name**	**Common Name**
1.	*Acacia leucophloea*	Raunj
2.	*Acacia nilotica*	Kikar
3.	*Acacia senegal*	Khairi
4.	*Albizzia lebbek*	Siris
5.	*Azadirachata indica*	Neem
6.	*Anogeissus pendula*	Dhauk
7.	*Bombax ceiba*	Semal
8.	*Boswellia serrata*	Salai
9.	*Butea monosperma*	Dhak

10.	*Cassia fistula*	Amaltas
11.	*Cordia dichotoma*	Lasura
12.	*Dalbergia sissoo*	Shisham
13.	*Holoptelia integrifolia*	Papri
14.	*Kigelia pinnata*	Kigelia
15.	*Melia azedarach*	Bakain
16.	*Pongamia pinnata*	Papri, Karanj
17.	*Prosopis cineraria*	Jand, Jandi
18.	*Salvadora oleoides*	Jal
19.	*Terminalia arjuna*	Arjun
20.	*Bauhinia variegata*	Kachnar