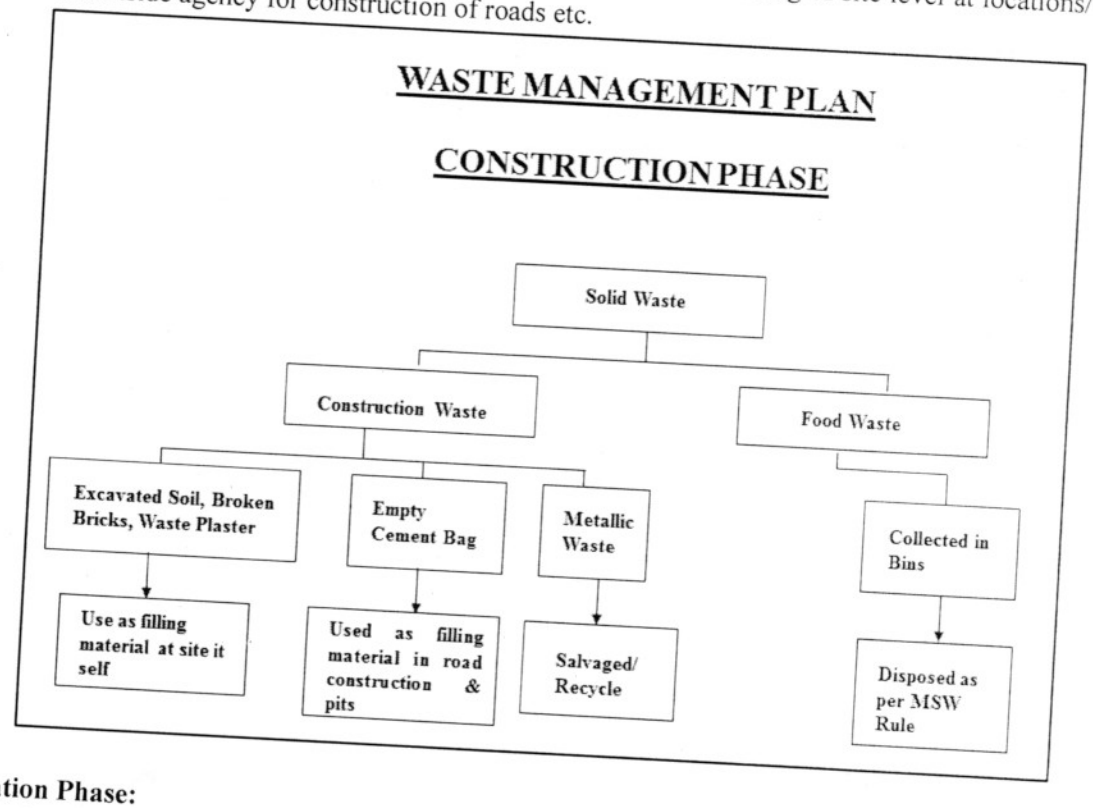
## SOLID WASTE MANAGEMENT

Solid waste would be generated both during the construction as well as during the operation phase.

**Construction 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 shall be utilized for refilling / road work / rising of site level at locations/ selling to outside agency for construction of roads etc.



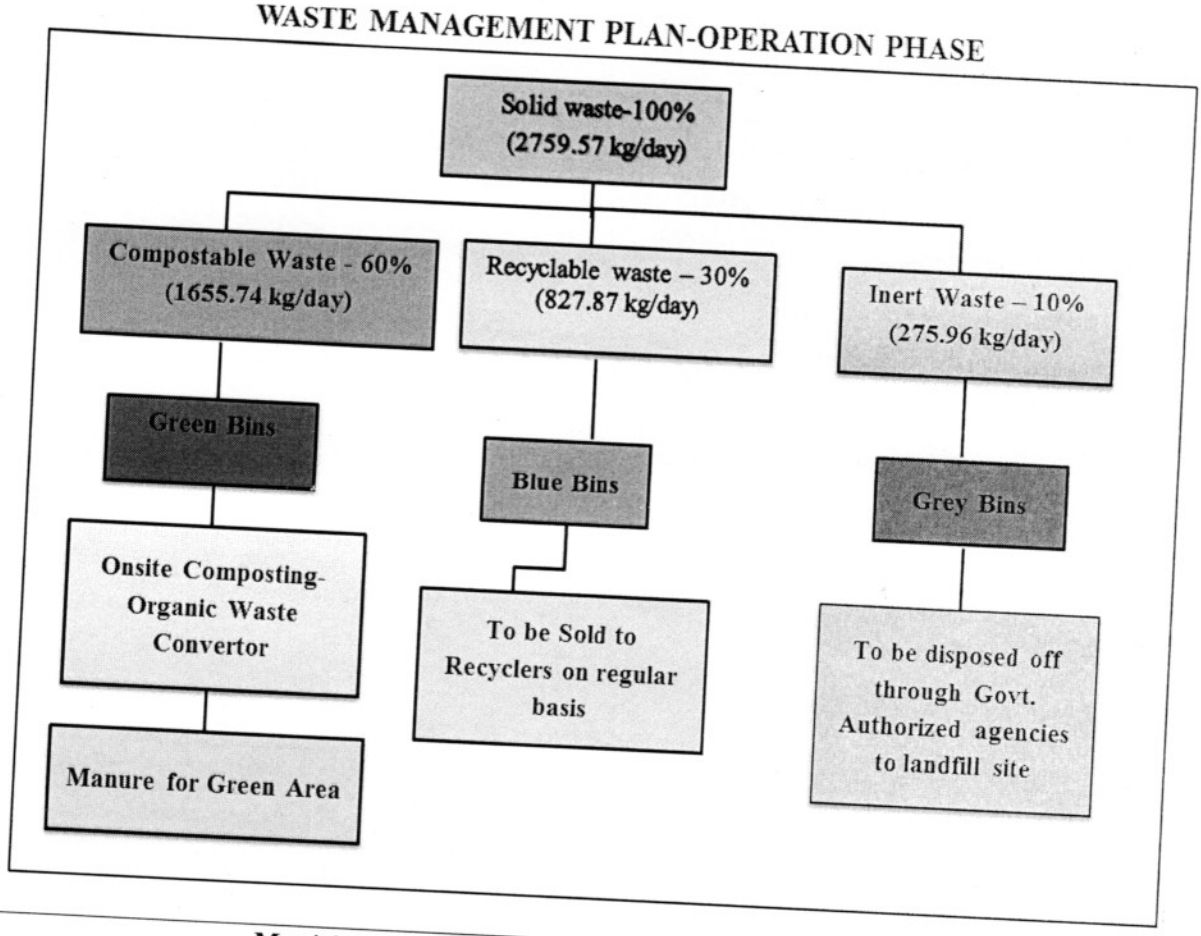

**Operation Phase:**

During the operation phase, waste will comprise domestic as well as agricultural waste. The solid waste generated from the project shall be mainly domestic waste and estimated quantity of the waste shall be approx. 2759.57 Kg/day kg per day (@ 0.50 kg per capita per day for residents.

## Total Expected Solid Waste Generation from the Project

| S.No. | Category | Population | Kg per capita per day (kg/capita/day) | Waste generated (kg/day) | % in term of total waste generation |
|---|---|---|---|---|---|
| 1. | **Residents** | | | | |
| | **Tower-1** | 2576 | @ 0.5 | 2536.5 | 91.92% |
| | **EWS Blocks** | 2432 | | | |
| | **Commercial** | 50 | | | |
| | **Service Staffs** | 15 | | | |
| | **Total Population** | 5073 | | | |
| 2. | **Floating Population (@25% of total Population)** | 1268 | @0.15 | 190.2 | 6.89% |
| 3. | **Landscape Waste (6346.81 $m^2$ = 1.568 acre)** | | @0.2 Kg/acre/day | 3.873 | 0.14% |
| 4. | **STP (Housing) Capacity: 315 KLD** | 290 KLD total waste water generation | 10% of the total waste water | 29 | 1.05% |
| | **STP (EWS Blocks) Capacity: 300 KLD** | | | | |
| | **Total Solid Waste Generated (predicted values) kg/day** | | **2759.573 Say 2759.57 kg/day** | | **100%** |
| 1. | Biodegradable Waste (60% of the Total Waste) | | 1655.74 kg/day | | 60% |
| 2. | Recyclable Waste (30% of the Total Waste) | | 827.87 kg/day | | 30% |
| 3. | Inert Waste (10% of the Total Waste) | | 275.96 kg/day | | 10% |

## WASTE MANAGEMENT PLAN-OPERATION PHASE




| Municipal Solid Waste Generation & its Management | | |
|---|---|---|
| **Particulars** | **Population** | **Solid Waste Generation (Kg/Day)** |
| Occupancy (@0.50 Kg/C/day) | 5073 | 2536.5 Kg/day |
| **Total Municipal Solid Waste (Kg/Day)** | | **2759.57 Kg/day** |
| **Nature of solid waste** | | Organic Waste: Wastes vegetables, flowers and foods, Papers cartons, thermocol, plastics, polythene bags etc.<br>Inorganic Waste: metallic and glass waste etc. |
| **Collection, Treatment and disposal** | | Municipal solid waste generated during construction and operational phases will be collected, treated and disposed as per the Municipal Solid Waste (Management & Handling) Rules, 2000. |
| **Recycling** | | The inorganic wastes comprising recyclable materials such as paper, plastic, glass etc. will be sold to prospective buyers. |

**Collection and Segregation of Waste**

1. A door to door and floor collection system will be provided for collection of food waste in plastic bags.
2. Adequate number of colored bins (green and blue-separate for bio-degradable and Non-Biodegradable) is proposed to be provided at the strategic locations.
3. Litter bin will also be provided in open areas like parks etc.

**Treatment of Waste**

- **Bio-Degradable Wastes**

1. Biodegradable waste will be subjected to composing and the compost will be used as manure.
2. Horticulture Waste is proposed to be composted and will be used for gardening purposes.

- **Recyclable**

1. **Grass Recycling** – The cropped grass will be spread on the green area. It will act as manure after decomposition
2. **Recyclable Waste** – like paper, plastics metals will be sold off to the authorized recycler of the area.

**Disposal**

Only Inert waste will be disposed off. These will be transported to the nearest landfill site by the hired waste management agency. However, the MSW management approach will be towards zero landfill by reducing the amount of inert waste.

**E-Waste**

Electronic waste popularly known as e-waste can be defined as electronic equipments/products (such as CDs, keyboards, monitors, power plug, batteries etc.) which have become obsolete due to:

- Advancement in technology
- Changes in Fashion, style and status
- Nearing the end of their useful life.

The e-waste generated from the proposed project would be suitably managed.

The 3R mantra of "Reduce, Reuse and Recycle" is proposed to be followed here.

- Reduce generation of e-waste through smart procurement and good maintenance.
- Reuse still functioning electronic equipment by donating or selling it to someone who can still use it.
- Recycle those components that cannot be repaired. To identify organizations who reuse or recycle electronics.