

Ahmedabad Municipal Corporation



Sanitary Landfill Site

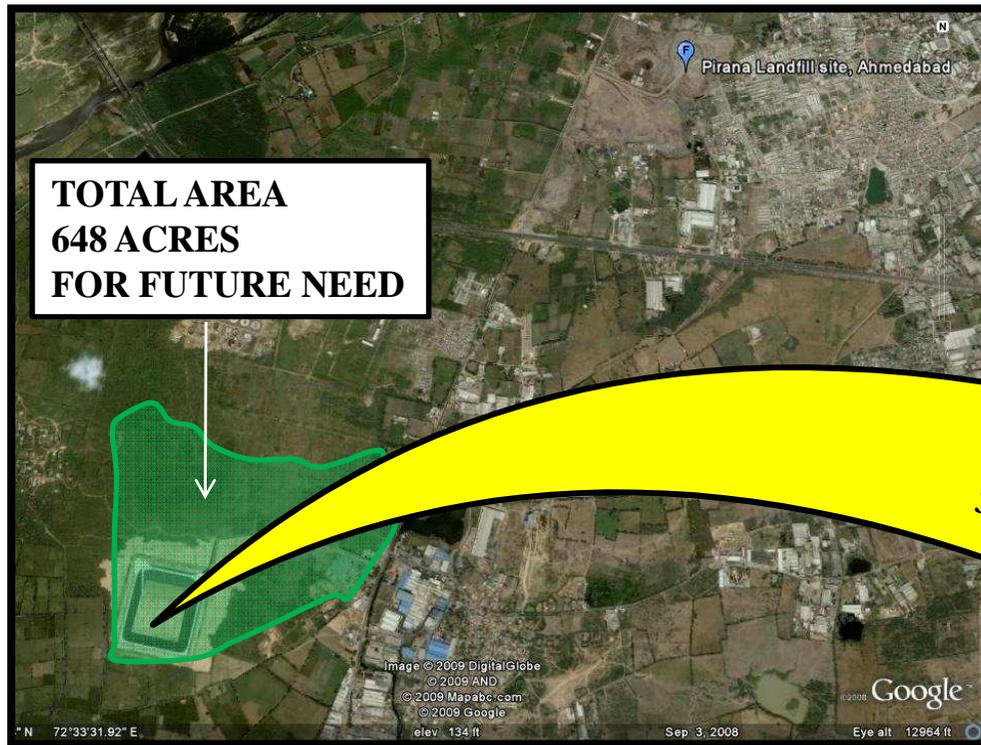
LANDFILLING as per MSW Rules,2000

Disposal Of Residual Solid Wastes On Land In A Facility Designed With Protective Measures Against Pollution Of Ground Water, Surface Water And Air Fugitive Dust, Wind-blown Litter, Bad Odour, Fire Hazard, Bird Menace, Pests Or Rodents, Greenhouse Gas Emissions, Slope Instability And Erosion

Solid Waste Management's Sanitary Landfill Site

The largest landfill site facility so far planned by any city in India.

Location: Gyaspur, Ahmedabad

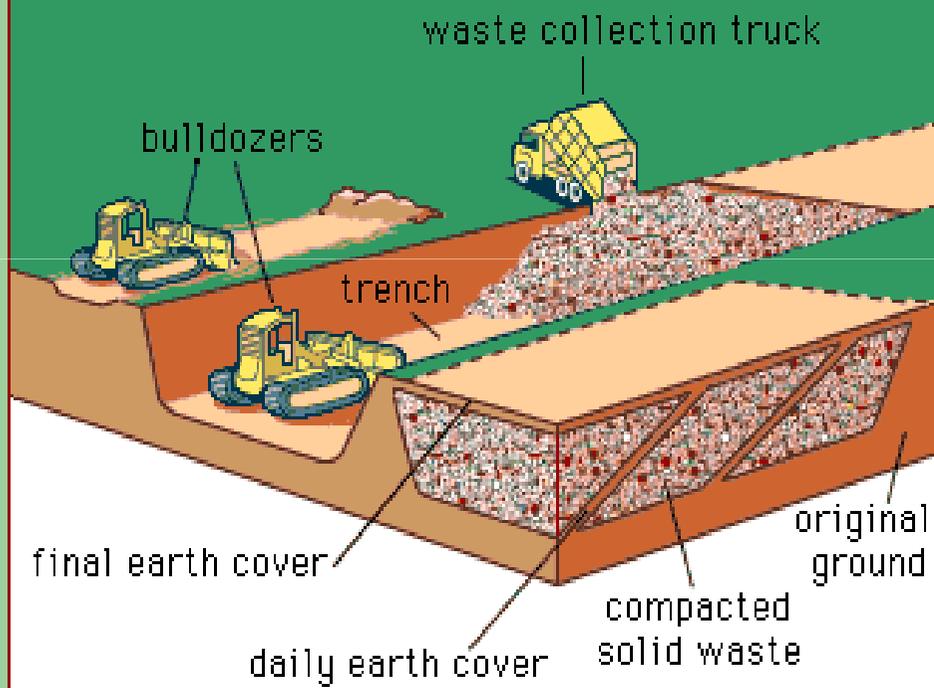


**DISPOSAL
CELL - I
32.83 ACRES**

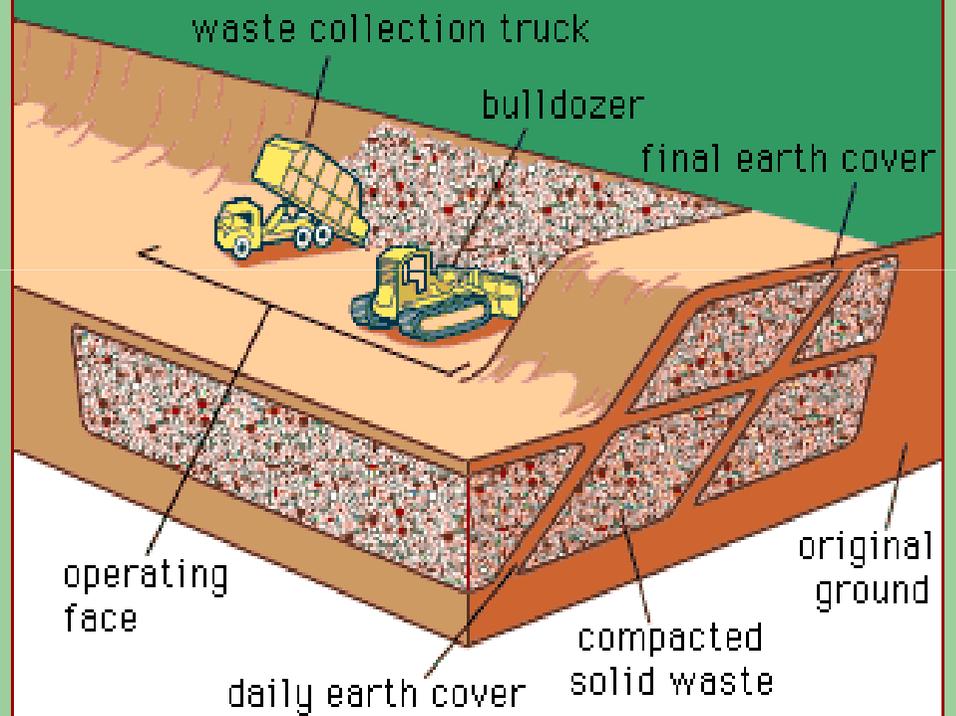
Disposal of Municipal Solid Wastes

- Land filling shall be restricted to non-biodegradable, inert waste and other waste that are not suitable either for recycling or for biological processing.
- Land filling shall also be carried out for residues of waste processing facilities as well as pre-processing rejects from waste processing facilities.
- Land filling of mixed waste shall be avoided unless the same is found unsuitable for waste processing.
- Under unavoidable circumstances or till installation of alternate facilities, land-filling shall be done following proper norms.
- Landfill sites shall meet the specifications as given in Schedule –III.

Trench method



Area method



Sanitary Landfill Site

- **The largest landfill site facility so far planned by any city in India**
- **Location: Gyaspur Ahmedabad**
- **Capacity = 11.50 Lacs Metric Tones (i.e. 1.15 million tones), where daily off load 500 metric tones of inert waste from waste processing plants for coming 6 years**

- **Total area used is 12.88 Hectares (32.8271 acres)**
- **Total construction cost of this site is Rs 13 Crores (i.e. Rs 130 million / i.e. \$ 2.796 million 1\$=Rs 46.50)**
- **Average size of shell = 262 m x 239 m = 62,618 Sq. M. (redesigned)**
- **Height of shell = 21.0 m**
 - 8.0 m below G/L (clear depth) +
 - 6.0 m above G/L in earthen bunds +
 - 7.0 m above earthen bunds in heap form
- **HDPE Liner 1.5 mm thick**
- **Air Space volume available for waste accommodation = 13.45 Lacs CMT**
- **Density of compacted waste = 0.85 MT/CMT**











16/02/2008



**TECHNICAL DETAILS OF SECURED ENGINEERED LANDFILL CELL NO.1 AT
GYASPUR, AHMEDABAD AS PER SPECIFICATIONS OF MSW RULES 2000**

| Sr. No. | Item Description | Quantity |
|------------|--|---|
| 1 | Quantum of Waste to be land filled | 500 MT / Day=182500 MT / YEAR |
| 2 | Average Size of the Cell Constructed | 262 m x 239 m x 14 m (D) |
| 3 | Top area of the phase | 304m x 281 x = 85,424 Sq.m. |
| 4 | Bottom area of the Cell | 220 m x 197 m = 43,560 Sq.m. |
| 5 | Inner Side Slope Area of the Cell | 44,389 Sq.m. |
| 6 | Outer Side Slope Area of the Cell | 20,769 Sq.m. |
| 7 | Average Depth of bottom most part of the Cell from existing GL | 8.00 m |
| 9 | So, Average total clear depth of the Cell from the top of the Cell | 14.00 m |
| 10 | Average Side Slopes maintained | 1:3 on inner side and 1:2.5 on outer side |
| 11 | Volume of Wastes accommodated in the Cell up to the top level | 8,76,652 Cu. m. |
| 12 | Volume of Wastes accommodated in the heap form above top level | 5,97,968 Cu. m. |
| 13 | Total Volume of Air space available | 14,74,620 Cu.m. |
| 14 | Less Volume of Liners | 1,29,232 Cu. m. |
| 15 | Net Volume or Capacity of Cell | 13,45,388 Cu. m. |

**TECHNICAL DETAILS OF SECURED ENGINEERED LANDFILL PHASE NO.1 AT
GYASPUR, AHMEDABAD AS PER SPECIFICATIONS OF MSW RULES 2000**

| Sr. No. | Item Description | Quantity |
|----------------|---------------------------------------|---|
| 16 | Density of the Compacted Wastes | 0.85 MT / Cu. m. |
| 17 | Capacity in terms of Weight of Wastes | 11,43,580 MT |
| 18 | Life of Cell | 6.07 years |
| 19 | Leachate Collection Sumps | 2 Nos. of size 2 m x 2 m x 5 m (H) |
| 20 | Leachate Collection Systems | 230 mm dia perforated HDPE Pipe Network at the bottom in the drainage layer |
| 21 | Approach Ramps | 2 Nos., 7.0 m Wide, 80 m Long, Slope 1:10 |
| 22 | Time in which the Cell is Constructed | 8 Months, Completed on 05/05/2008 |
| 23 | Construction Cost of the Cell | Rs.12.50 Crores |
| 24 | Technical Project Consultant | Environment Engineering Laboratory, The Gujarat Institute of Civil Engineers and Architects, Ahmedabad |
| 25 | Project Constructed by | M/s. M. P. Patel Infrastructure Pvt. Ltd., Ahmedabad |

**PROPOSED INFRASTRUCTURE AT SECURED ENGINEERED
LANDFILL CELL NO. 1 AT GYASPUR, AHMEDABAD**

| | |
|----|---|
| 1 | Security Cabin |
| 2 | Entrance Gate & M. S. Gate |
| 3 | Weigh Bridge |
| 4 | Platform |
| 5 | Administrative Building With Laboratory |
| 6 | Parking Shed |
| 7 | Workers Toilet & Drinking Room |
| 8 | Electrical Sub Station with D.G And Panel Room |
| 9 | Compound Wall & Wire Fencing |
| 10 | Under Ground Water & Bore Well |
| 11 | Truck Parking Area & Truck Wash System |
| 12 | Test or Piezometer Bore & wells around Landfill |

Sanitary Landfill Site is inaugurated by
Honorable Chief Minister of Gujarat **Shri**
Narendrabhai Modi on 14/10/2009





SECURED ENGINEERED LANDFILL SITE (OPERATIONAL FROM 14.10.2009)

Capacity 11.50 Lacs Metric Tones (i.e. 1.15 million tones), where daily off load 500 metric tones of inert waste from waste processing plants for coming 6 years, total construction cost of this site is Rs 13 Crore (i.e. Rs 130 million / i.e. \$ 2.796 million 1\$=Rs 46.50) and area used is 12.88 Hectares (32.8271 acres).

























THANK YOU

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