

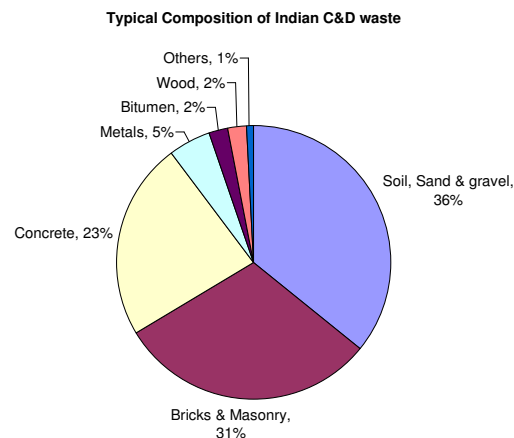
**CONCEPT NOTE  
FOR  
RECLAMATION OF LAND THROUGH A CONSTRUCTION DEBRIS  
MANAGEMENT FACILITY  
AT  
BURARI PLAINS**

**I INTRODUCTION**

1. The Indian Army presently owns about 40.65 Ha of land at the Burari Plains.
2. *Location:* The site is about 2.5 Km from Bhalaswa Landfill [See Annex- Satellite Imagery]. The area is about 100 acres / 40.65 Ha and the average depth of the site below the road level is about 8 ft (2.4384 m).
3. *Boundaries:* the site is bound by Jahagirpuri Residential colony and JJ clusters to the North and West, open plains to the east and south and Bhalaswa lake and outer ring road to the North.
4. *Site Geology:* The area is located in on an older alluvium formation of quaternary period composed of mainly sand with sub-ordinates amount of silt and clay. The site is virtually marshy with reed grass and water hyacinth (hydrophytes). The marshy condition is due to location on paleo channels. Normal water table raises in this area raises upto 2 m post monsoon and goes down to a level of below 5 m during the dry months. Sensitive locations in the vicinity include the Bhalaswa Lake (2 kms).

**II THE PROJECT**

5. With major changes in the space allocation in the Delhi region, the Indian Army [IA] intends to maximize the use of available land. One piece of land available with the Army is in the Burari plains and the Army intends to reclaim the land for development purposes. While the Army is reviewing the proposed use of the land as and when reclaimed, Municipal Corporation of Delhi (MCD) has made an offer to reclaim the land by treating and disposing construction debris generated in Delhi. Brief description of the entire proposed system of C & D debris operations of MCD are given in Attachment I.



6. *This is a win-win proposal for both the Army [in need of land by reclamation] and MCD in need of a site for treatment and disposal of construction debris. Moreover, this project will go a long way in addressing Delhi's solid waste disposal problems.*

7. As per census of India there are about 2.45 million properties in Delhi of which roughly 0.9 million are assessed properties. Even by a conservative estimate, using Technology Information Forecasting and Assessment Council (TIFAC), Dept of Science & Technology averages, Delhi should be producing debris to the extent of 4600 tons. Post recycling, the available quantity should be of the order of 3300 tons. However, in effect the average daily estimate as MCD's record is about 1000-1200 tons. Daily average, as per log sheets at Landfills for a 15-month period ending May 2005, varies from a high of 2,877 tons in July to 446 and 442 tons in August and September. Average for the period is 879 tones per day. The higher quantum during July is due to removal of silt from drains.

8. Typical construction waste consists of Concrete (23%), Soil and sand (36%) and bricks and masonry (31%). As on date, debris is used as a landfill to a large extent and the quantity that cannot be absorbed by the market reaches the landfills of MCD. To improve C&D collection, treatment and disposal, MCD proposes to invite private operators to collect, transfer and treat C&D waste.

9. In terms of technology, the proposed operator shall install and operate a "mobile crushing facility" to handle approximately 500 Tons Per Day (TPD) of waste. The associated infrastructure in this case includes a temporary site office and reception and storage facility. Essentially with the mobile crushing option, the site will not require permanent construction work. The scope of work of the proposed operator in this regard will also include compacting and leveling of the land to enable civil construction.

### III PROJECT OPTIONS AND ECONOMICS

10. *Development Options:* Permissible development on a site of this scale in the Delhi is regulated by the rules of Delhi development Authority as applicable to large campuses (above 8 Ha.) See concept plan (Attachment II)

11. As per the above regulations, the total built up area, permissible on ground, at the site at Burari is approx. 20 acres. The balance land (approx. 80 acres) is required to be left open, as roads, parks, for utilities etc. The proposed campus has been divided into three parts, and the regulations applicable are as under:

ACTIVITY	AREA ALLOCATION	MAX. GROUND COVERAGE	AREA AVAILABLE
	%	%	Acres
Academic, including administration		45	9.00
Residential	45	33	8.32
Sports and culture	15		2.25
Parks & Landscape	15		
<b>Total [approx.]</b>			<b>19.57</b>



12. Assuming that 20 acres having built up area require to be filled to ground level (+ 2.4 m), and the balance land requires to be filled to 75 % of the ground level (+ 1.8 m), the amount of C & D waste required to fill the site is approximately 7,50,000 Cu.M.

13. The daily volume of waste available for fill purposes is 330 Cu.M. This will be supplemented with silt to complete the filling of the land in 6 years. At the end of this period, the land will be fully available to the army for development and construction.

14. Based on an outline concept plan of the Indian Army, MCD can progressively transfer land reclaimed at Burari.

#### **IV FINANCIAL ASPECTS**

15. The proposed agreement will not have any financial impact on the Army. There would be lease agreement between MCD and Indian Army. Payment of the lease rent of Rs. 100/- per annum shall be made by MCD to Indian Army based on the current government rules of Rs. 1/- per acre per annum.

#### **V CONCLUSION**

16. This is a win-win proposal for both the Army [in need of land by reclamation] and MCD in need of a site for treatment and disposal of construction debris. Moreover, this project will go a long way in addressing Delhi's solid waste disposal problems.

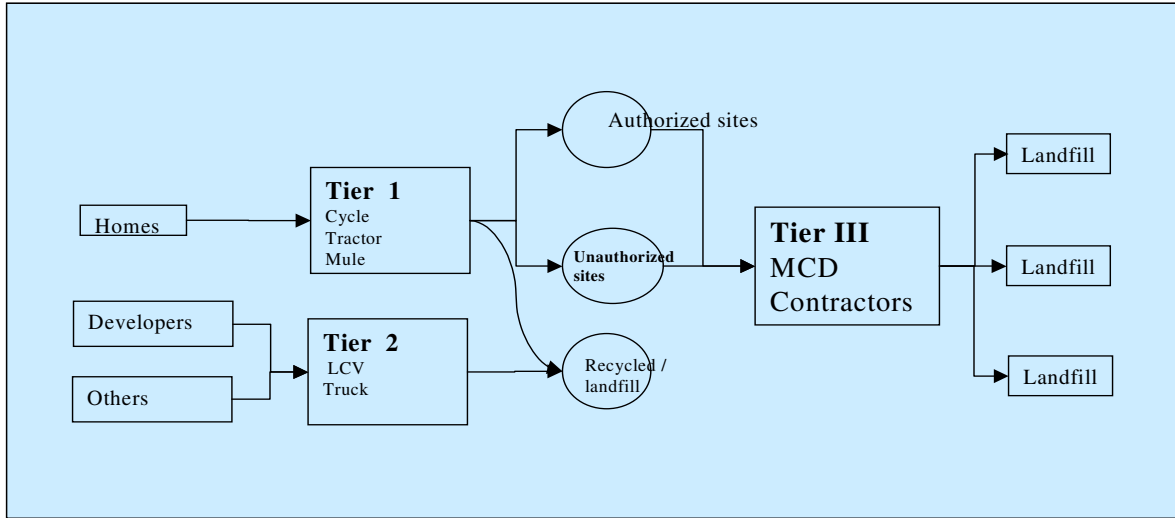
#### **VI THE NEXT STEPS**

17. The key actions from the Indian Army and MCD are as follows:

- i. Clearance from the Army headquarters for signing of lease agreement [to reclaim land] with MCD (*Attachment III*)
- ii. IL&FS has already carried out the following activities:
  - Rapid EIA for the site
  - Topo survey of the site
- iii. On signing of the agreement between MCD and Indian Army, IL&FS will apply for permission from Delhi Pollution Control Committee to establish and operate a mobile crushing unit
- iii. IL&FS to start the Pilot Project for collection, treatment and disposal facility for C&D debris.

**OPERATIONAL ASPECTS OF PROPOSED SYSTEM OF MCD**

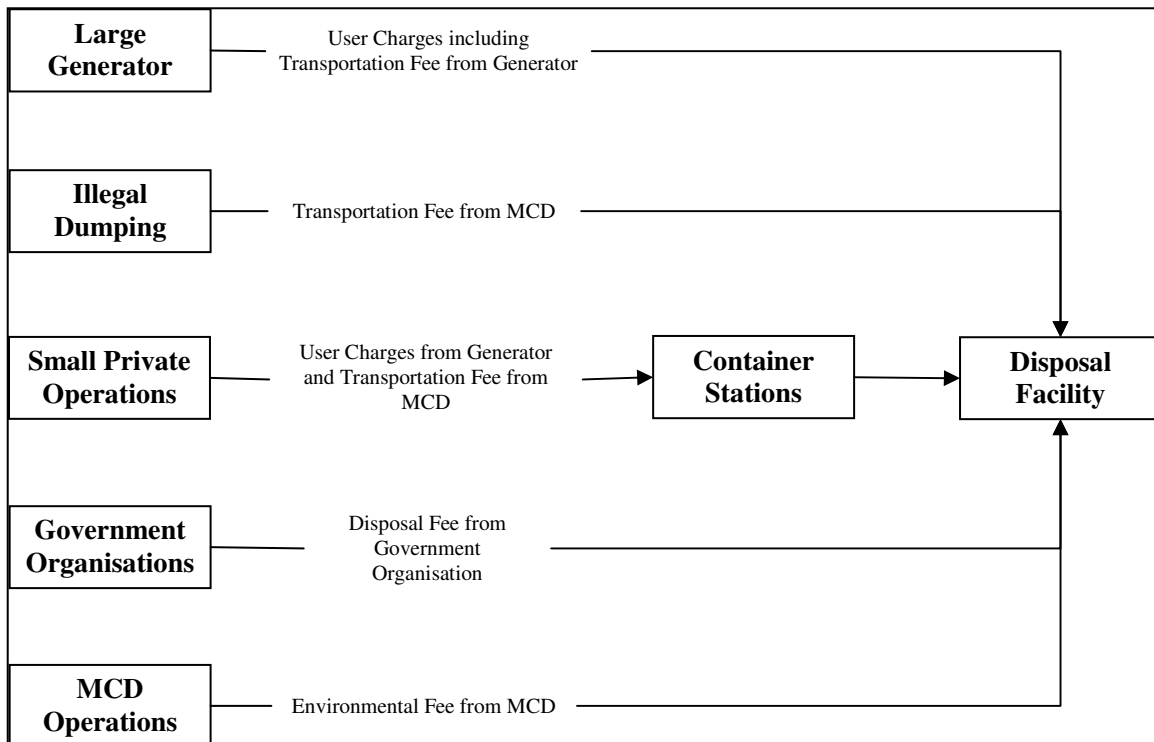
**1. Existing System**



**2. Proposed System**

1. The suggested arrangement for handling 500 TPD of C&D debris handling facility is as follows:

- Location of skips of 10 Cum Capacity in each of the zones at specific locations.
- Location of skips of at major residential colonies and at sites based on demand.
- The recommended treatment is by a way of a fixed/ mobile jaw crusher.



3. For the successful implementation of the Pilot project, MCD shall undertake the following:
- Issue an office order to all the government organisations like DDA, PWD etc. notifying them about the new proposed facility and pay the necessary tipping fee of C&D waste at the disposal facility.
  - Issue Public Notice to inform about the new C&D waste collection and disposal system and the Container locations and direct the public to dispose the C&D waste in the listed container locations only or directly to the C&D facility side.
  - Mandating submission of a construction Waste management plan by large generators (> 400 sq m of Construction)
  - Provision of adequate information to citizens at the time of application for building permission / on web site and other media including display at the zonal offices on the protocol and details of the C&D operator in the area.
  - Provision of adequate information to citizens at the time of application for building permission/ on web site and other media including display at the zonal offices on the protocol and list of operators in the area;
  - Notification of fee for each level of operation

**PROPOSED DEVELOPMENT ON LAND BELONGING TO ARMY AT  
BURARI**

