

8501

30.	Near Collage on Wazirabad Road (a large chunk of land)	10	DDA	Solid Waste Management facility	EDMC	DDA should hand over the land to EDMC.
31.	Site near Khichari Pur	2.5	DDA	Solid Waste Management facility	EDMC	DDA should hand over the land to EDMC.

Consultant (SLF)  
North DMC

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Annexure - B

8502

**SOUTH DELHI MUNICIPAL CORPORATION  
OFFICE OF THE DIRECTOR (DEMS) SDMC  
2<sup>nd</sup> LEVEL Dr. S.P. MUKHARJEE, CIVIC CENTRE,  
JAWAHARLAL NEHRU MARG, NEW DELHI - 110002**

No. 865...DIR/DEMS/2015

Date: ...13/4/15...

To

The Pr. Secy.,  
Urban Development,  
Govt. of Delhi,  
9<sup>th</sup> level, Delhi Sectt,  
New Delhi.

Sub: - ACTION PLAN FOR MUNICIPAL SOLID WASTE MANAGEMENT IN SOUTH DELHI MUNICIPAL CORPORATION (SDMC) IN THE LIGHT OF THE JUDGMENT OF THE TRIBUNAL IN ORIGINAL APPLICATION NO. 40 (THC) OF 2013 IN THE MATTER OF PEOPLE FOR TRANSPARENCY THROUGH KAMAL ANAND V/S. STATE OF PUNJAB, DECIDED ON 25.11.2014, AND ON 20.3.2015 JUDGMENT WITH REGARD TO THE STATE OF HARYANA IN THE MATTER OF ALMITRA H. PATEL VS. UNION OF INDIA, ORIGINAL APPLICATION NO. 199 OF 2014.

Sir,

This has a reference to letter of Addl.Secy. (Env.)/Member Secy., DPCC, Govt. of NCT of Delhi bearing No. DPCC/WMC-11/2015/A-14/494-499 DT. 28/3/15 whereby it was requested to prepare Action Plan in compliance of the Hon'ble NGT orders dt. 20/3/15 in the aforesaid matter and submit the same directly to the Department of Urban dEvelopment, Govt. of Delhi with a copy to DPCC.

Accordingly, Action Plan for Municipal Solid Waste Management in South Delhi Municipal Corporation (SDMC) in the light of the judgment of the Tribunal in original application no. 40 (thc) of 2013 in the matter of people for transparency through kamal anand v/s. state of Punjab, decided on 25.11.2014, and on 20.3.2015 judgment with regard to the state of haryana in the matter of almitra h. patel vs. union of india, original application no. 199 of 2014 has been prepared and the same is enclosed herewith for further necessary action.

This issues with the prior approval of the Commissioner, SDMC

*Amresh Sachdev*  
Director (DEMS)

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Sub: - ACTION PLAN FOR MUNICIPAL SOLID WASTE MANAGEMENT IN SOUTH DELHI MUNICIPAL CORPORATION (SDMC) IN THE LIGHT OF THE JUDGMENT OF THE TRIBUNAL IN ORIGINAL APPLICATION NO. 40 (THC) OF 2013 IN THE MATTER OF PEOPLE FOR TRANSPARENCY THROUGH KAMAL ANAND V/S. STATE OF PUNJAB, DECIDED ON 25.11.2014, AND ON 20.3.2015 JUDGMENT WITH REGARD TO THE STATE OF HARYANA IN THE MATTER OF ALMITRA H. PATEL VS. UNION OF INDIA, ORIGINAL APPLICATION NO. 199 OF 2014.

The Hon'ble National Green Tribunal Branch vide its orders dated 20.3.15 inter-alia directed to file a comprehensive affidavit within four weeks in light of the judgment of the Tribunal in Original Application nO. 40 (THC) OF 2013 in the matter of People for Transparency Through Kamal Anand V State of Punjab, decided on 25th November, 2014 and today's judgment with regard to the State of Haryana in the matter of Almitra H. Patel Vs. Union of India, Original Application No. 199 of 2014.

In compliance of the various directions that have been spelt out in the orders referred above, an Action Plan suited to the conditions prevailing in South Delhi Municipal Corporation (SDMC) are as given below:-

The orders of 20th March, 2015 have mentioned of the approach adopted in case of the city of Karnal in Haryana to implement the various measures as mentioned in the orders of 20.3.2015 as well as the conditions prevailing in SDMC, an action plan in this regard has been prepared. The salient features of the Action Plan are as given below:-

1/1 & 1

### BACKGROUND

After trifurcation of Municipal Corporation of Delhi (MCD), the South Delhi Municipal Corporation, (SDMC) comprises four zones namely West Zone, Najafgarh Zone, Central Zone and South Zone. Every zone is further divided into various numbers of wards.

SDMC for National Capital Territory of Delhi is responsible for providing municipal and civic services for the benefit of the public residing within such territory, which includes the collection, storage, transportation and final disposal/treatment of the Municipal Solid Waste (MSW) generated in their jurisdiction.

2/2 & 2

### STATUS

PRESENT STATUS OF MANAGEMENT OF MUNICIPAL SOLID WASTE (MSW):- I. SDMC has a total area of 656.91 sq. kms having population approximately 56 lacs within its territorial jurisdiction. The SDMC collects, transports and disposes all Municipal Solid Waste (MSW), Debris/Construction and Demolition (C&D) Waste/Malba of all the colonies

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falling under its jurisdiction including unauthorized colonies/slum areas/clusters/regularized colonies etc.

II. In order to ensure to follow the Municipal Solid Waste (Management and Handling) Rules-2000, the SDMC have developed an extensive system for collection, transportation and disposal of Solid Waste through various methods of disposal/processing.

### III. EXISTING MSW MANAGEMENT.

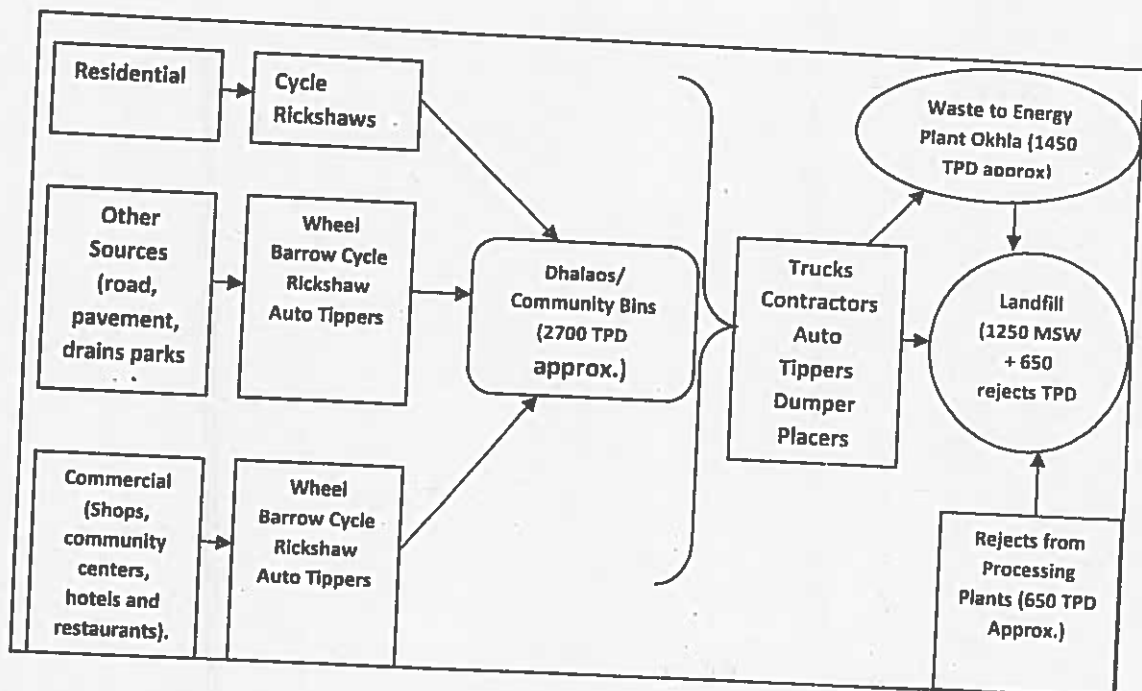
At present about 2700 M.T of MSW is collected daily from 1197 Nos. of Receptacles /Collection center/ (Dhalaos/Dustbins/Open sites) existing at different places in the various Wards in all four zones of SDMC. This MSW does not include waste picked up by Rag pickers / kabariwala at the door step and Collection Centers. This waste generated by the citizens is deposited in the receptacles either by the citizens themselves or through private Rag Pickers and the same is taken to Sanitary Land Fill sites Okhla Phase-I, Waste to Energy Plant Okhla, Compost Plant Okhla, and Sanitary Land Fill Site Bhalswa (North DMC) for processing/disposal. Details of collection of above said MSW is as under:-

S. No.	Name of Zone	Total Ward with Ward Nos. (In nos.)	Dhalaos/ Dustbins/ Open sites (In nos.).	Collection of garbage per day (Approx.) (In MT)
1.	West Zone	28 (101 to 128)	245	930
2.	Najafgarh Zone	20 (129 to 148)	152	450
3.	Central Zone	30 (153 to 160 185 to 188 190 192 to 208)	350	650
4.	South Zone	26 (161 to 184)	450	670
Total		104	1197	2700

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V. SDMC has outsourced through Concessionaires the work of collection, segregation, transportation and disposal of Municipal Solid Waste (MSW) from Municipal receptacles to existing Sanitary Land Fill sites and compost/processing plants in the zones namely, West Zone, Central Zone and South Zone. The work of Collection & Transportation of MSW in Najafgarh Zone is being carried out by departmental staff and machinery.

VI. COLLECTION OF MUNICIPAL SOLID WASTE FROM SOURCE TO PROCESSING/DISPOSAL FACILITY ARE AS UNDER:-



VII. From the chart given above it is evident that out of 2700 MT of MSW about 54% is processed at Waste to Energy Plant Okhla and Compost Plant Okhla and about 46% is dumped at Sanitary Land Fill site Okhla and Sanitary Landfill Site Bhalswa (North DMC).

VIII. The additional waste comprising 600 MT of (C&D) Waste/Malba, 230 MT of Silt and 650 MT of ash (received from Waste to Energy Plant, Okhla) is being dumped daily at Sanitary landfill Site Okhla, Phase-I and Sanitary Landfill site Bhalswa (North DMC).

IX. COMPOSITION AND PROPERTIES OF MSW.

(i) Biodegradable Waste — Biodegradable material are the largest component of the waste today which comes from household. It is likely that large portion of waste will continue to be biodegradable in future also. The average 40% of waste content will be the biodegradable.

(ii) **Recycle Waste/Non- Biodegradable** — With the increase in income and economic development it is almost certain that recyclable material generation at household level will go up. The source segregation of household waste benefits enhancing recycling. The average content of recyclable waste in the form of plastic, paper, metal, glass etc. is varies from 15-25%.

(iii) **Inert Waste** — High content of inert waste is available in MSW. The main source of inert waste is street sweeping; C&D waste and drain silt. Any initiative regarding inert waste should have two stage approach towards construction waste and other waste. The average content of inert waste in the form of silt, road sweep and C&D waste/Malba etc. is varies from 30-35%.

(iv) **PHYSICAL COMPOSITION OF MUNICIPAL SOLID WASTE IN DELHI.**

Parameters	Percentage (%)
Biodegradable	38.6
Paper	5.6
Plastic	6.0
Metal	0.2
Glass and Crockery	1.0
Non-biodegradable (leather, rubber, bones and other synthetic material)	13.9
Inert (stones, bricks ashes etc.)	34.7

(v) **CHEMICAL COMPOSITION OF MIXED MUNICIPAL SOLID WASTE IN DELHI.**

Parameters	Percentage
Moisture	43.8%
Organic Carbon	20.5%
Nitrogen as N	0.9%
Phosphorus as P <sub>2</sub> O <sub>2</sub>	0.3%
Potassium as K <sub>2</sub> O	0.7%
C/N ratio	24.1
Calorific value	713 kCal/kg

X. Presently about 2700 MT of garbage, 600 MT of (C&D) Waste/Malba, 230 MT of Silt and 650 MT of Ash (received from Waste to Energy Plant, Okhla) are collected daily from SDMC and the same is disposed/processed at the following facilities.

S. No	Name of facilities	Disposal/Processing of Waste			
		MSW (In MT)	Malba (In MT)	Silt (In MT)	Ash/Reject (In MT)
1.	Sanitary Land Fill Okhla Phase-I	250	475	200	650
2.	Waste to Energy Plant Okhla	1300	-	-	-
3.	Compost Plant, Okhla	150	-	-	-
4.	Sanitary Land Fill Bhalswa (North DMC)	1000	125	30	-

(XI). STATUS OF EXISTING FACILITIES:-

a. SANITARY LAND FILL OKHLA PHASE-I.

SDMC has only one Sanitary Land Fill site Okhla Phase-I situated at Maa Anand Mai Road has an area of approximately 32 acres. The operation include disposal of waste, its leveling and providing cover over it with inert material. This Sanitary Land fill site though got exhausted long time back and the height of fill at present is about 50mtr above the general ground level, but due to non availability of any other alternative site, the present site is being continued, by raising the level of filling above the general ground level. Things have now come to such a pass that it is now getting difficult with each passing day to operate the present land fill site but having no other option this site have to be continued even at the risk of loss of human life and property.

b. WASTE TO ENERGY PLANT OKHLA.

In the SDMC area only one Waste to Energy Plant at Okhla having capacity of 1950 MT of MSW per day to produce 16 MW of power is being

operated by Timar Pur Okhla Waste Management Company Private Ltd. (Managed by M/s Jindal Urban Infrastructure Ltd under the administrative control of Power Department of GNCTD). It is also pointed out that after processing the waste at compost plant Okhla and Waste to Energy plant Okhla, about 40% residues is returned back at Sanitary Land Fill site Okhla Ph-I for disposal.

**c. COMPOST PLANT OKHLA.**

One Compost Plant Okhla, having capacity of 200 MT of MSW per day for converting into compost is being operated by M/s ILFS at their own cost.

- 3/1, 2, **FUTURE PLAN FOR MANAGEMENT AND HANDLING**
- 2.1, 2.2, **OF MUNICIPAL SOLID WASTE USING MODERN**
- 2.3, 2.3.1, **TECHONOLOGIES**
- 2.3.2 & 2.4.

**FUTURE GENERATION OF MSW.**

3.1 It is estimated that by 2024 the total quantum of waste collected shall be 14300 MT per day, out of which SDMC shall collect approx 4500 MT per day. Forecast for increase in Population and Municipal Solid Waste, in Delhi during 2015-2024 is as follows, to give an overview:

Year	2015	2020	2024
Population of the state of Delhi	198,50,240	223,16,664	245,08,689
MSW Collected (TPD)	9,427	11,883	14,302
MSW Collected per capita (Kg per day)	0.475	0.532	0.584

\*Source: - Master Plan report for Delhi by COWI (April 2004)



From the above forecast it is evident that the MSW generation in Delhi shall grow at a very fast rate, whereas due to rapid urbanization of the city the availability of land for setting up MSW processing plants [within the urban limits] is of utmost importance.

#### 4/3, 4 & 2.1 MANAGEMENT PRINCIPLES AND COLLECTION & SEGREGATION

##### 4.1 PRIMARY COLLECTION:-

Presently the SDMC has provided Dhalaos/Dust Bins/Receptacles/community bins at different locations in the colonies/areas for collection and storage of municipal waste. It is generally found that the DDA does not adequately provide such kind of spaces in the existing as well as new colonies.

Keeping in view the provisions made in Master Plan for Delhi-2021, it is proposed that decentralized management of waste at local level is required to be implemented which inter-alia include segregation at source (by generators), door-step collection, segregation, processing and recovery of waste at local level. Consequently only a small portion of waste (approx 20%) may be required to transported to landfill. This will require DDA to provide land measuring 10 acres approximately for every 4/5 wards in the colonies/areas to cater to the needs of processing of MSW. This also includes spaces to be provided for segregation of different kind of non-biodegradable waste.

However, it is also to be understood that the said requirement of sites for facilities may not be available everywhere. For areas where such decentralized sites are not feasible, the corporations need to transport the waste to a centralized facility, where it may be processed. This alternate is more expensive as it requires transportation of raw waste to long distances, hence should be considered where there is absolutely no scope for decentralized management of waste.

##### 4.2/5.5 & 2.4. CONSTRUCTION OF TRANSFER STATIONS FOR A STORAGE OF MSW AND CONSTRUCTION & DEMOLITION (C&D) WASTE:-

To have an effective and economical transportation system, whenever the garbage is to be transported to a longer distance, intermediate transfer stations are required to be made. In view of MPD-2021, it is proposed that DDA will provide at least land for eight transfer stations measuring 1 acre.

each in each of the 04 zones of the SDMC. In addition, four sites (one in each zone) and measuring 1 acre each shall be required for transfer station of C&D waste.

#### 4.3. CONSTRUCTION OF WORKSHOP AND PARKING FACILITIES:-

A space providing adequate shelter for repair and maintenance of vehicles and other heavy equipment is required to have effective transportation system. As per MPD-2021, DDA has to provide land measuring 1 acre each for at least 02 sites in SDMC to manage the current fleet. For new development of colonies, (or colonies that are getting regularized as per policy) additional fleet will be required to be deployed and hence, DDA needs to reserve additional space @ 1 acre in 2 additional sites for developing workshop facilities for transportation of garbage.

4.4 South Delhi Municipal Corporation had called tenders for collection & transportation of Municipal Solid Waste for all four zones which would be valid for the next seven years. For effective management of the solid waste, priority has been accorded for segregation of the waste. This is proposed to be achieved by way of setting targets for primary collection in a phased manner. Accordingly the following percentages are proposed to be implemented.

Year	First year	Second year	Third Year	Fourth year onwards
Target for street level service*	-	Min 50%	Min 60%	Min 75%

In addition to this, the segregated material is proposed to be recycled at the recycling centers which would be set-up by the concessionaires. The residual material would result in retrieving materials such as plastic, paper, metals, glass, cloth etc.

Year	First year	Second year	Third Year	Fourth year onwards
Target for Recycling*	-	Min 20%	Min 30%	Min 40%

- a. Concessionaire shall in consultation with SDMC convert at least four Dhalaos as 'Recycling Centers' for segregation of dry waste received through street level & door to door primary collection service. Concessionaire has to increase the number of recycling centres on increasing the quantity of same in consultation with SDMC.
- b. Dry waste collected from street level, door-to-door system and from commercial establishments shall be transferred only to these designated 'recycling centers'. These designated centers shall receive only dry waste.
- c. There shall also be a provision for the households to directly deposit or sell their recyclable dry waste to the Concessionaire at these recycling centres at pre-notified rates. A weighing scale and counter shall be provided at each recycling unit to serve this purpose.
- d. Concessionaire shall be allowed to sell the recyclable waste to Kabadiwala/ secondary market and retain sales realizations.
- e. Only 'inert' non-recyclable waste shall be allowed to be transported to the SLF Okhla or any other designated sites from these centre's.
- f. Concessionaire shall ensure that these designated Dhalaos should be used exclusively for the dry waste. Any other form of waste should not be brought at these Dhalaos.
- g. Concessionaire shall ensure that there should no overflow of inert waste and inert waste at these recycling centre's shall not be visible to public at any time.
- h. Inert waste shall not be littered outside the Dhalaos at any time.
- i. Concessionaire shall not close the recycling centre's at any time in any circumstances

Another important objective of the project is to introduce 3 Rs (Reduce, Re-use and Recycle) so as to reduce the load of disposal of solid waste. For this purpose, the concept of segregation of waste (dry and wet) at household level, separate waste handling chain for different kind of waste and recycling centers at ward level have been envisaged.

#### EFFECTIVE TREATMENT

In order to maximize the uses of MSW the same shall be taken to the Waste to Energy Plant and Compost Plant.

**5/5.1 & 2.1 REGULATORY MEASURES**

For effective implementation of the existing laws a system of penalties for different violation is essential. Since the existing system of penalties in the Municipal Corporations is decades old, the penalty structure needs to be amended/changed with the present day conditions.

The South Delhi Municipal Corporations has sent proposal to amend section 482 of the DMC Act 1957 to enhance the existing penalty under the Bye-laws from Rs. 500/- to 10,000/- and also amendment in 12<sup>th</sup> schedule of DMC Act inter alia proposing enhancement of certain penalties alongwith Delhi Sanitation Bye-laws to Delhi Govt. for notification. A copy of the said proposal is annexed herewith as Annexure -"A" (Colly).

The Delhi Sanitation Bye Laws therefore, need to be notified. Government of National Capital Territory of Delhi is required to notify these Sanitation Bye-Laws.

**6/5.3 & 2.1 MARRIAGE HALLS / KALYAN MANDAPS / COMMUNITY HALLS:**

- a. Providing "Time-Table" bound primary MSW collection service to Markets/ Hotels/Dhalaos/ Commercial Establishment and daily markets.
- b. "Time-Table" shall be prepared by Concessionaire and SDMC to approve it.
- c. Concessionaire shall be responsible to collect minimum 60% of total waste generated from all hotels, Restaurants & Dhalaos by the end of 1st year of concession period, 75% by end of 2nd year and 90% from 3rd year onwards.
- d. From Commercial Establishments: Concessionaire shall ensure to collect minimum 60% of total waste generated by end of 1st year of concession period, 75% by end of 2nd year and 90% from 3rd year onwards.
- e. Route plan with Time Table for each vehicle shall be provided by the Concessionaire to SDMC. Route plan shall also, clearly mention Ward, Area/Locality and street etc. Route plan shall be provided in tabular form as well as in Geographical Information System (GIS) map form.
- f. Auto Tippers having capacity of 1.75 cum (AT 1.75) with mechanical "Bin-Lifting" capability to lift 240 liter bin/120 liters bin (AT 1.75 with Bin lifting Capability) shall collect the MSW and transfer the wet waste directly into Mobile Transfer Station (MTS).

- Dry waste from AT 1.75 with Bin lifting Capability shall be transported to the designated recycling centers.
- g. Concessionaire shall plan to collect waste from Markets, Hotels, Dhalaos, Restaurants, Banquet Hall, Farm House & other Commercial Establishments in coinciding with opening time of these establishments.
  - h. This is a 'Paid Service'.
  - i. Concessionaire shall be responsible to collect the User Charges from different types of commercial establishments as per User Charges table provided as Annexure-V or as notified by SDMC from time to time.
  - j. User Charges so collected shall be retained by the concessioner.
  - k. In case Authority revises the tariff beyond what is prescribed in Annexure-V additional amount so prescribed shall be payable by the Concessionaire to SDMC.
  - l. Monthly report of collections to be shared with SDMC.
  - m. Auto tippers engaged in this service shall not collect the waste from any other source viz. Dhalaos, open site, ground, street corner bin and drain etc.
  - n. Auto tipper engaged in this service shall not dump the waste at any Dhalaos /open sites or on the ground in any circumstances.
  - o. MTS shall transfer the MSW directly to Waste to Energy plant, Okhla, SLF Okhla or any other processing site/plant designated by SDMC.
  - p. This service shall be provided on all 365 days in a year irrespective of any National Holidays, Festivals and Sundays.

**7/5.4 & 2.1 HOSPITAL / NURSING HOMES / PATHOLOGICAL LABORATORIES / HEALTH CARE CENTRES:**

The Municipal Corporation have a system for collection, transportation and treatment of Bio-Medical Waste have been outsourced to DPCC through their approved Common Bio-Medical Waste Treatment Facilities (CBMWTF).

**8/5.5 & 2.4 CONSTRUCTION & DEMOLITION (C&D) WASTE**

- a. Collection and transportation of C&D waste is envisaged as demand based services. SDMC initially is seeking only tipping fee from the proposed bidder. As and when SDMC decide to initiate the services

- to due notice to the selected Concessionaire, who shall then follow the following procedure to lift the C&D waste. The resources shall be arranged by the Concessionaire on receipt of such notice from SDMC.
- b. Concessionaire on specific request or instructions by SDMC has to make suitable arrangements for collection and transportation of C&D waste generated due to construction and renovation activities undertaken by households and SDMC.
  - c. Concessionaire shall not dump C&D waste at the Dhalaos, open sites, road side or bins or open ground etc.
  - d. C&D waste shall be transported separately without mixing with any other kind of waste to the designated sites only.
  - e. Concessionaire shall ensure that C&D waste should not be mixed at the Dhalaos, open sites, bins and ground either. In case, if C&D waste is dumped or mixed at Dhalaos, open site and ground concessionaire shall have to clear the C&D waste from such places free of charge.
  - f. C&D waste from Najafgarh Zone to be transported to Gummanhera. C& D waste from South & Central Zone to be transported to the designated processing site at Okhla or any other processing site as notified by SDMC.
  - g. Concessionaire may either purchase or hire suitable vehicles and equipments for this purpose.

#### 9/5.6 & 2.1 GARDEN WASTE

- a. Concessionaire shall be responsible for the collection and transportation of green waste generated from households of specified colonies/ localities at least twice a week using Auto Tippers having capacity of 1.75 cum and transporting to specified Nurseries as below:

S. No.	Name of Zone	Location of the Nursery
1.	South	Concessionaire shall transport the green waste collected from this zone to Vasant Vihar Nursery
2.	Central	Concessionaire shall transport the green waste collected from this zone to New Friends Colony Nursery

3.	West	Concessionaire shall transport the green waste collected from this zone to Punjabi Bagh West Nursery
4.	Najafgarh	Concessionaire shall transport the green waste collected from this zone to Park Near Market, Sector-6, Dwarka

- b. SDMC shall at its own cost install the weighbridges at each of the above specified nurseries for the weighing of vehicles carrying green waste.
- c. Route plan in tabular form as well GIS map form with timings of collection shall be approved by SDMC.
- d. Concessionaire shall be responsible to increase the frequency of collection as per the directions given by SDMC during the seasonal variation.
- e. SDMC may increase or decrease localities for the collection of green waste.
- f. Waste collected using this service shall not (in any condition) be unloaded in Secondary Collection Points or any other sites/ points and
- g. Green waste shall not be mixed with any other kind of waste.

#### 10/5.7. DAIRY WASTE

Since there are hardly any dairies in the city of Delhi this aspect is not very much relevant. However, for waste generated in the dairies at Mandanpur Khadar, Khakrola and Masudpur Dairy, the same can be used for composting.

#### 11/6.0 & 2.1 PROVISIONS OF LITTERBINS ON STREETS AND PUBLIC PLACES.

South Delhi Municipal Corporation has started with a programme to provide liter bins at places which are prone to throwing the garbage. These are normally market place or areas having high footfalls like bus stand, parks etc. Since the existing numbers are found to be short of the requirement, it is proposed to increase the same by way of providing liter bins / dustbins.

**12/7.0 & 2.1 STORAGE DEPOTS**

SDMC desires that the Concessionaire achieves zero waste situations at SCPs. However, practically it is understood that this could only be achieved over a period of time in a phased manner. Till such time, secondary collection points need to be managed in following manner:

- a. Concessionaire shall be handed over Secondary Collection Points (SCP) on as-is-where-is-basis by SDMC at the start of the Contract.
- b. From the date of handover till end of contract, concessionaire shall be fully responsible for carrying out up gradation, management and upkeep of all the secondary collection points.
- c. Concessionaire shall carryout modification of civil structures of Dhalaos as per layout provided in the Annexure V, including Repairs and re-furbishing of roof and walls; laying flooring, providing shutter/door/gate; external & internal plaster; internal & external white wash/paint etc.
- d. All Recycling Centers, Fixed Compactor Transfer Station (FCTS) and Dhalaos (where waste is coming more than 8 ton) shall be manned 24x7, Dhalaos (where waste is coming less than 8 ton) shall be manned for 1 shift in a day, all Mobile Transfer Station (MTS) shall be manned minimum by 1 driver & 1 helper by personal employed by the Concessionaire on its pay role. No outsourcing /subletting or subcontracting would be permitted.
- e. SCP Manpower shall wear specified uniform along with personal protective equipment.
- f. Concessionaire shall have no rights to display advertisements on any of the secondary collection points. It is SDMC who shall have exclusive advertising rights on SCP and all project facilities.
- g. Washing of Dhalaos shall be done weekly, while sweeping, cleaning and disinfection of secondary collection points shall be done on daily basis.
- h. Concessionaire shall ensure that:
  1. Different colored Bins are used depending upon type of waste received:
    - Wet waste - green colour bin (capacity 1.1 cu m)
    - Street sweeping waste - brown colour bin (capacity 1.1 cu m)
    - Drain Silt - Black colour bin (capacity 5 cu m) at the designated Dhalaos



- Dry waste – blue colour bin (capacity 1.1 cu m)
- 2. There is no mixing of various kinds of wastes (i.e. MSW, street sweeping waste, drain silt, Green waste and C&D waste should not mixed)
- 3. Waste is not be littered on the floor of the Dhalaos or outside Dhalaos at any point of time.
- 4. Bins shall not be overflowing and shall be covered when they are filled.
- 5. Bins from Dhalaos shall be taken out at the time of unloading in to Compactor only.
- 6. Adequate number of additional bins shall be provisioned to receive excess waste.
- 7. Bins need to be maintained so that there are no breakages, cracks, leakages, toppling of bins and dislocation of covers. The Concessionaire shall maintain adequate number of spare bins and ensure repair and replacement of damaged bins within 24 hours.
- 8. Log of reporting's of damaged bins should be maintained by Concessionaire at SCP as well as office which is subject to audit /inspection by SDMC. Continuance of default shall be viewed seriously.
  - i. Auto tipper shall not be allowed to dump the waste at Dhalaos and open sites.
  - j. Non-conforming waste including the C&D waste shall not be allowed to be dumped at the Dhalaos and open sites.
  - k. If non-conforming waste is found, Concessionaire shall transport such waste to the specified disposal sites at own cost.
  - l. The Concessionaire shall ensure that the area within 15 metre radius from the periphery of the Secondary collection points shall be kept clean all the times.
  - m. Bins shall be cleaned, washed and disinfected (with approved disinfectants) at least once in a week while painting of all project assets shall be done once in an every six months.
  - n. Garbage stored at the secondary collection points should not be visible to public in any circumstances.
  - o. Designate the Dhalaos for silt where 5 cum covered container (colour of container-brown) shall be placed for the collection of silt.

- p. Dhalaos receiving Zero waste should be handed over to SDMC by Concessionaire. Thereafter, that Concessionaire shall not have any responsibility towards that Dhalaos.
- q. The clearing schedule of bins should ensure that the bins are emptied at least once in every twelve (12) hours.

#### **13/8.0 & 2.2 TRANSPORTATION OF WASTE**

As per the proposed plan the primary transportation of waste shall be done by using the Auto Tippers and the Secondary transportation of waste shall be done by using closed compactor vehicles. The concessionaire would be responsible for the entire management of the transportation of waste.

#### **14/9.0 DISPOSAL OF WASTE (AT CLUSTER LEVEL, AS PROPOSED)**

Bio-degradable Waste is mostly processed at the Compost Plant and non-biodegradable waste at the Waste to Energy Plant. The other waste which can be recycled will be processed at the Waste Processing Centre now proposed to be set-up @ 4 per Municipal Ward.

#### **15/10.0 & 2.3 MSW PROCESSING / TREATMENT TECHNIQUES**

The different types of waste will be processed using appropriate technologies / techniques. The different methods that would be deployed are as under:

1. Bio-degradable waste for conversion to Compost
2. Non-biodegradable waste for use at the Waste to Energy Plant
3. Recycling Centers: during the course of segregation all the materials that would be retrieved would be recycled at the recycling centre. Such centers would segregate the glass, plastic, metals etc. Such recycling would help in reuse of the materials and help in conservation.
4. Construction & Demolition Waste: with the proposed construction & demolition centers the end products such as Tiles, Kerb Stones, would help in conservation of the scarce mineral resources.

16/2.33. **DECENTRALIZATION WASTE MANAGEMENT**

i. The SDMC also proposes to introduce a concept of decentralized Zero-garbage Management System, where the garbage of 4-5 Wards would be processed locally reducing the requirement of transportation and processing plants/landfill sites. It also minimize the objections from general public. The concept paper has been prepared and a pilot project on the same is under consideration. To implement the said project, the SDMC would require a site for developing as 'facility centre' for which 10-15 acres of land for 4-5 wards would be required in local areas. The SDMC is requesting the DDA to identify and allot small pieces of land (10-15 acres) at various locations so that this project could be taken up wherever land is available.

ii. A project report for decentralized garbage management has been prepared. It is expected that approx 5 sites in the jurisdiction of SDMC may be identified and made available by DDA for implementation of decentralized garbage management project.

17/9,10, **TOTAL PROCESSING FACILITIES(CENTRALISED) TO BE**

10.1, 10.2, **CREATED.**

10.3, 10.4,

10.5, 10.6

& 2.3

i) In future due to fast pace of urbanization and increase in population, the generated quantity of MSW/Waste will also increase. Forecast for increase in of Municipal Solid Waste in Delhi during 2015-2024 is approximated up to 14300 MT per day. On proportionate basis the MSW generation in the jurisdiction of SDMC is estimated about 4500 MT per day.

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ii. In addition to the above, additional facilities for future disposal/processing of MSW, C&D Waste and Ash is proposed to cope up with the increase in MSW generation is as under:-

S.No.	Name of facilities	Disposal/Processing of Waste (per day)				Total MSW capacity (in MT)
		MSW (In MT)	Malba (In MT)	Silt (In MT)	Ash/Reject (In MT)	
1.	Proposed site at extension of existing SLF site Okhla Phase-I on the land of container depot/CCI.  i. Waste to Energy Plant.  ii. Compost Plant  iii. C&D Waste Plant  iv. Engineered SLF site.	2100  500  0	500	100	780	2600
2.	Proposed site on Takhand Land near SLF Okhla Phase-I.  i. Compost Plant.  ii. Engineered land fill for rejects, silt and misc. waste	500			150 (Rejects) + (Misc)	
3.	Ghummanhera site.  C&D Waste Plant.		1000			

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4.	Near village Bakar Wala. i.C&D Waste Plant.		500			
5.	Proposed site near jouna pur pahari on Mandi road for Engineered land fill for rejects, silt and misc. waste and for C&D Waste		1000			
6.	Proposed site near Chattar pur Phari		500			
6.	Already existing Waste to Energy Plant At Okhla	1200				
7..	Already existing Compost Plant At Okhla	200				
GRAND TOTAL		4500	3500	100		4500

18/2.4 & LAND REQUIREMENT TO IMPLEMENT AFORESAID  
9, 10, 11. PROPOSALS.

Purpose	Location	Area
Decentralized MSW Management	5 sites of approx 5-15 acres each at various locations	5 sites @ 10 acres = 50 acres.
Transfer Stations	MSW – 4 zones @ 2 per zone C&D – 1 per zone	12 sites @ 1 acre = 12 acres
Workshops	1 per zone	4 sites @ 1 acre = 4 acres
Compost Plants	2 plants	2 sites @ 15 acres = 30 acres
C&D processing plant	2 plants	2 sites @ 10 acres = 20 acres

Waste processing + Waste to Energy Plant	1 plant	1 Site @ 35 acres = 35 acres
Engineered land fill for MSW, Ash & Rejects	2 sites	2 sites @ 85 acres = 170 acres
Total		Approx 321 Acres

#### 19/2.4. CONSTRUCTION AND DEMOLITION (C&D) WASTE.

At present about 600 MT per day of Debris/C&D Waste/Malba generated in all four zones of SDMC due to either renovation or construction of house/shop etc. The C&D waste generated is likely to increase to 3500 TPD in 2024. This debris/C&D Waste is presently being collected transported and disposed at Sanitary Land Fill (SLF) site Okhla Phase-I and Bhalswa by SDMC. This debris is used to cover already filed up waste and for making approaches into SLF site for movement of Refuse Removal Vehicles.

A successful experiment of processing and recycling of C&D waste has been concluded at Burari (now in North DMC). The SDMC proposes to create similar facilities for processing/ disposal of C&D Waste at following locations:-

- i. Proposed site extension of existing SLF site Okhla Phase-I.  
(Capacity 500 M.T.D)
- ii. Proposed site near Chattar pur Phari. (Capacity 500 MTD)
- iii. Proposed site near Jouna Pur Pahari on Mandi road.  
(Capacity 1000 MTD)
- iv. Gummanhera Site (Capacity 1000 MTD)
- v. Near village Bakkar Wala. (Capacity 500MTD)

#### COMPOST PLANTS:-

One Compost Plant Okhla, having capacity of 200 MT of MSW per day for converting into compost is being operated by M/s ILFS. The experiment has been successful and reduces the requirement of SLF sites.

SDMC proposes to have similar composting facilities created in decentralised manner so that the recovery can be made and utilised at local level. These small composting units can be created in the decentralised facility centres.

In addition, Centralised composting plants are proposed at following locations as land for decentralised plants may not be available at all places-

- (a) Additional compost plant at proposed site extension of existing SLF site Okhla Phase-I, on CONCOR/CCI land. (Capacity 500 MTD).
- (b) One compost Plant at proposed site on Thakhand land. (Capacity 500 MTD).

#### **WASTE PROCESSING AND WASTE TO ENERGY PLANT:-**

Waste to Energy Plant at Okhla having capacity of 1950 MT of MSW per day to produce 16 MW of power is being operated by Timar Pur Okhla Waste Management Company Private Ltd. (Managed by M/s Jindal Urban Infrastructure Ltd ).It is also pointed out that after processing the waste at compost plant Okhla and Waste to Energy plant Okhla, about 40% residues is returned back at Sanitary Land Fill site Okhla Ph-I for disposal.

SDMC proposes to establish additional processing and Waste to Energy Plant for disposal of MSW at following locations:

- a) Proposed site extension of existing SLF site Okhla Phase-I on CONCOR/CCI, (Capacity 2100 MTD).

#### **viii. DISPOSAL OF REJECT/ RESIDUE:-**

Considering the quality of MSW generated in Delhi and the socio-cultural aspects of generation, it is estimated that initially, about 40% of the total quantum of MSW shall be the residue required to be disposed at SLF. However, with proper Information & Education Campaign, Regulations and enforcements, the citizen need to be educated about their duties and responsibilities regarding segregation and management of waste. Thus, it may take some time to improve the quality of waste leading to lower percentage of residue. Eventually, it is targeted that the residue generated from MSW in Delhi to be brought to less than 30% by 2024.

The requirement of land for disposal of Residue/ reject is estimated as follows

Year	2015	2024
Waste Generation (MT Per day)	2700	4500
Quantity processed (MT Per day)	1450	4500
Remaining (Unprocessed) (MT Per day)	1250	0
Residue (%) from processed	40%	30%
Quantum of Residue (MT Per day)	580	1350
Total to be disposed at Land Fill Sites (MT Per day)	1250	1350

For disposal of Residue and MSW the following land /sites are proposed:-

- Engineered Land-fill site at proposed site extension of existing SLF site Okhla Phase-I on CONCOR/CCI land. (Capacity 780 MTD):
- Engineered Land-fill site at proposed site on Takhand Land near SLF Okhla Phase-I. (Capacity 150 MTD + MISC).
- Engineered Land-fill site at proposed site near jouna pur pahari on Mandi road for rejects, silt and misc. waste and for C&D Waste. (Capacity 1000 MTD + MISC).

#### 20/11 & 2.4. ULTIMATE DISPOSAL OF MSW

With measures that are proposed to be adopted in SDMC's new tenders whereby different treatments have been proposed for different types of waste the dependence on the landfill sites would be considerably reduced. The different methods of reuse, retrieval of the solid waste have been spelt out in detail as given above.

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**21/12 & 2.3.3. FINANCIAL ASPECT**

Providing sanitation services is one of the obligatory functions on the part of the Municipal Corporations. Funding for the activities required to be carried out comes by way of generation of internal resources for certain aspects of work. Most of the salaries too the employees are paid out of the revenue generated by the Municipal Corporations. However, to augment / improve the existing systems grant in aid is also provided by the Govt. NCT of Delhi.

**22/13 MOBILE SANITATION COURTS**

In compliance of the orders of Hon'ble Supreme Court of India the Hon'ble High Court of Delhi appointed 8 nos. of Municipal Magistrates in South Delhi Municipal Corporation to try offenses, in relation to littering & causing nuisances, sanitation and public health. These Municipal Magistrates have challaned 6658 defaulters and an amount of Rs. 11,40,850/- has been recovered during the year 2013-14.

**23/14. REDRESSAL OF PUBLIC GRIEVANCES**

The various provisions have been made in the SDMC recently received tenders for collection and transportation of Municipal Solid Waste. Customer Care Center/Control Room/Complain address system shall have following key components:

- a. Dedicated phone lines and staff to receive complain or request from public and SDMC staff.
- b. Mobile phone's short code number to receive complaint's SMS and Web-Interface for customer to directly feed complaints.
- c. Workflow to track the work that is reported and report back to person originating the complaint.
- d. Customer Care center/Control Room shall be manned by concessionaire staff.

**DEDICATED PHONE LINES**

- a. A dedicated phone number with minimum 10 lines (and extendable based on actual requirement). Maximum call waiting time shall be 2 minutes for any received complaints. While the customer is waiting, a recorded voice message indicating that complains can be logged by SMS or on web shall be played, in addition to general greetings.
- b. All calls shall be recorded and shall be reviewed for the quality of interaction of their staff with the customers/SDMC staff. This recording shall be made

- available to SDMC, any or all the agency/ies designated by SDMC for auditing purpose.
- c. Concessionaire shall put a detailed Standard Operating Plan (SOP) in place to elaborate actual arrangement.
  - d. Report received from customer shall be stored online directly. Unique ticket number shall be generated and communicated to caller along with expected time for correcting the issue.
  - e. Control Room shall be staffed adequately to receive and process the complaints. Control room shall be operational from 7 am till 10 pm on all days.

#### **SMS TO RECEIVE COMPLAINT**

- a. Short code based SMS service shall be deployed by Concessionaire to receive complains/requests in structured SMS form.
- b. Similar Short code based SMS service shall be deployed by Concessionaire to receive requests from SDMC staff for on demand service.
- c. User friendly web shall be created to receive complains from SDMC/customers online.

#### **WORKFLOW TO TRACK STATUS**

- a. Each complaint request shall be assigned a unique ticket number.
- b. Each complaint shall be forwarded via-SMS and system to the concerned executing person with a copy to reporting supervisor.
- c. Once ticket is closed, it shall be updated in the database. In case complaint is not addressed within specified time, reason for delay along with likely resolution time shall be supplied in database.
- d. Status of complain if completed or not completed (along with reason and likely date of addressing) shall be supplied to the customer on or before the specified date.
- e. Customer feedback shall be taken on completion of task and shall be stored in the database.
- f. Similar system shall be in place for SDMC staff raised request/complaint ticket.
- g. Status shall also be searchable online using ticket number and customer phone number.
- h. Current status of all open and closed complaints shall be visible online and user shall be able to view their status by date or/ and complain number etc.
- i. On completion of work –SMS shall be sent back to the customer indicating completion of work. Systems shall have provision to take

feedback of customer on the level of satisfaction based on service provided.

- h. Daily summary report Zone Wise, Sub-Zone, Ward Wise shall be sent to the relevant designated SDMC staff. These reports shall be auto-generated from the customer complaint database

**24/15, 15.1, MANAGEMENT ASPECTS, INSTITUTIONAL SETTING,  
15.2, 15.3 MANAGEMENT PLAN AND STANDARDIZED  
PROCEDURES.**

These issues have already been considered in the aforesaid points and in the Action Plan for Management and Handling of Municipal Solid Waste Using Modern Technologies in South Delhi Municipal Corporation (SDMC). However SDMC has also set up a system in the office complex at Dr. Ambedkar Stadium, Delhi Gate, New Delhi for providing training, motivation etc. to the Safai Karamcharies, Supervisory staff etc. for carrying out Sanitation work and Engineering works etc. etc.

**RECOGNITION OF INFORMAL SECTOR:-**

As on date the rag pickers collect the garbage and segregate the same at various stages of the Waste Management. These rag pickers responsible for segregation, carry out this task at the first stage of collection i.e. from the door step. Further, the rag pickers carry out segregation at the receptacles and then finally at the landfill/processing Plant. Since these rag pickers are un-organized, as on date a policy needs to be framed so as to give them recognition and integrate them with the mainstream management of garbage disposal. The policy framing would require to be done by the Labour Department of GNCTD.

**25. TENTATIVE COST FOR IMPLEMENTATION OF THE AFORESAID  
ACTION PLAN, SDMC.**

S. No.	Nature of work	Anticipated expenditure per annum Rs.(in crores)	Expected Time of Completion after issue of work order
1.	Carriage and Transport of Municipal Solid Waste from various areas to Waste to Energy Plant Okhla, Compost Plant, Okhla/ other processing plants and Sanitary Land Fill, Okhla and Bhalswa (North DMC).	250	7 Years

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2.	Procurement of machinery for deployment of SLF sites for Bulldozers, excavators etc and repair and maintenance of existing machinery at SLF Okhla	05	1 Year
3.	Purchase of stores for sanitation activities	05	1 Year
4.	Requirement of tractor trollies	05	1 Year
5.	Payment for muster roll	05	1 Year
6.	Procurement of diesel for running machinery	02	
7.	Segregation of Construction & Demolition Waste	12	7 Years
8.	Development of Integrated Waste Facilities (excluding the cost of land).	200	25 Years
<b>Total</b>		<b>484</b>	

## 26. MONTHLY USER CHARGES:

The issue of monthly user charges for door to door solid waste collection as followed in the Haryana State Plan for Management of Municipal Solid Waste can be replicated by South Delhi Municipal Corporation too. However, since the issue is a policy matter approval of the Standing Committee, Corporation of SDMC is required before implementation of the scheme.

## 27. STATUS OF AVAILABILITY OF LAND FOR DEVELOPMENT OF SLF SITES AS WELL AS SETUP OF PLANT FOR PROCESSING OF MSW AND DEBRIS/C&D WASTE/MALBA.

To implement the aforesaid Action Plan, the requirement of the land is absolutely essential for SDMC. While the SDMC is trying its utmost to get the lands allotted from DDA/GNCTD not much progress has been made. The status as on date is as under:-

### RULE POSITION:-

As per rules, it is the responsibility of DDA to select / identify, acquire the land for land fill sites and to take clearance from Delhi Pollution Control Committee, Central Pollution Control Board, Ridge Management Board,

Environment Department and Central Empowered Committee, appointed by the Apex Court etc for disposal/ processing of MSW and handover the same to SDMC free of cost and free from all encumbrances.

#### ORDERS OF THE HON'BLE SUPREME COURT OF INDIA

In the Writ Petition CWP No. 888/1996 in the matter of Almitra H. Patel and Anr Vs U.O.I. & others; relating to Solid Waste Management in India, the Hon'ble Supreme Court of India in its decision dated 15.2.2000 gave directions to this effect that:

*"We direct that sites for landfills will be identified bearing in mind the requirement of Delhi for the next twenty years within a period of four weeks from today by the exercise jointly conducted by Union of India through the Ministry of Urban Development, Government of National Capital Territory of Delhi, Commissioner, MCD, and Chairman, NDMC and other heads of statutory authorities like the DDA etc. These sites will be identified keeping in mind the environmental considerations and in identifying the same Central Pollution Control Board's advice will be taken into consideration. The sites so identified shall be handed over to the MCD and or NDMC within two weeks of the identification, free from all encumbrances and without MCD or the NDMC having to make any payment in respect thereof.*

*We further direct Union of India through Ministry of Urban Development, Government of National Capital Territory of Delhi, Commissioner, MCD, Chairman, NDMC and other statutory authorities like DDA etc. to identify and make available to the MCD and NDMC within four weeks from today sites for setting up compost plants. Initially considering the extent of solid waste, which is required to be treated by compost plants, the number of sites, which should be made available, will be eight. **Such sites shall be handed over to the MCD/NDMC free of cost and free from all encumbrances within two weeks of identification. MCD and NDMC shall thereupon take appropriate steps to have the compost plants/processing plants established or caused to be established and to be in operation by 30th September, 2000"***

#### LANDS ALLOTTED BY DDA/GNCTD

In compliance of the aforesaid directions, the following lands were allotted/handed over by the Delhi Development Commissioner and Delhi Development Authority to erstwhile MCD for development into SLF sites and for setting up Compost/Processing plants against the requirement of 1500 acres land for the next 20 years, out of which the requirement of land of SDMC is about 500 Acres. Status of land is as under:-

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Sl. No.	Name of site	Area (In Acre)	Present status comments
1.	On Jaitput/Tajpur road behind Badarpur Thermal Power House in Central Zone.	24.60	This site had been handed over by Development Commissioner, Delhi to erstwhile MCD but could not be put to use for SLF, because of high density of population in the vicinity.
2.	Near village Ghumman Hera, in Najafgarh Zone.	140.00	This site has been handed over by Development Commissioner, Delhi to erstwhile MCD, but this site falls in the Air Funnel and as such cannot be used for disposal of MSW. However this site is proposed to be utilized for setting up of plant for processing/ disposal/ recycling of Construction and Demolition (C&D) Waste /Malba.
3.	Near Village Bakkarwala in West Zone	10.00	This site has been handed over by DDA to erstwhile MCD but the site cannot be put to use for processing of MSW because of high density of human habitation in the vicinity. However this site is proposed to be utilized for processing/recycling of C&D Waste/Malba.
Total		174.60	Effective land made available to SDMC for processing/ disposal of MSW is NIL against the requirement of land 500 acres.

iv In addition to the above the following two sites have been allotted/handed over to South Delhi Municipal Corporation (SDMC) by DDA on 16.6.2014. Details of the same are as under:-

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S.No.	Location of site	Approx. area (in acres)	Purpose
1	Site at Location-A, Sector-24 Dwarka.	5.0	It is proposed that this site will be used for setting up of Zero Waste Management.
2.	Site at Location-B, Sector-29, Dwarka	5.0	It is proposed that this site will be used for setting up plants for processing/disposal/re-cycle of Horticulture waste, Plastic Waste and Crematorium for small animals.

**TRANSFER OF ISSUE OF ALLOTMENT OF LAND FROM HON'BLE SUPREME COURT TO HON'BLE DELHI HIGH COURT.**

i In the matter of Almitra H. Patel and Anr Vs U.O.I. & others W. P. (C) No. 888 of 1996, the issue pertaining to allotment of land for SLF sites for Municipal Corporation of Delhi (MCD) was transferred to Hon'ble High Court of Delhi by the Hon'ble Supreme Court of India on 19.7.2010 with the request to expeditiously hear and dispose of the matter preferably within three months.

ii. The Hon'ble High Court in the said matter bearing W. P. (C) No. 5236 of 2010 constituted a committee under the chairmanship of Secretary (UD) GNCTD comprise of a senior officer each from DDA, MCD, Ministry of Urban Development, Land & Building Department, Ministry of Environment GNCT of Delhi. The committee has recommended 31 sites for Solid Waste Management Facilities, out of these 31 sites, 18 sites fall in SDMC, 8 sites fall in North DMC and 5 sites fall in EDMC. List of these 31 sites is annexed herewith as Annexure-"B" (Colly).

Out of 18 sites with SDMC, only following 2 sites are best suited for processing/disposal of Municipal Solid Waste under the jurisdiction of South Delhi Municipal Corporation. The details of the same are as under:-

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S. No	Name of Proposed land/sites	Approx. area of land (in acres)	Ownership of land	Purpose	Remarks
1.	Proposed site extension of existing SLF site Okhla Phase-I on the land of CCI/CONCOR	(About 14.2+18.15+97.0) = 129.35 acres	DDA	Integrated Waste Management facilities	DDA should hand over the site to SDMC.
2.	Propose site on Tehkhand land near SLF Okhla Ph-I	About 36.0 acres	DDA	Integrated Waste Management facilities	DDA should hand over the site to SDMC.

Brief note on these sites is annexed herewith as annexure-"C" (colly):-

In this regard, an appropriate policy decision is required to be taken to shift Inland Container Depot (ICD) from Okhla/Tuglakabad to an alternate location, some of the possible locations in NCR can be Dadri, Manesar, Bawal.

It is also submitted that the various measures that have been suggested in the report to comply with the directions of the Hon'ble NGT especially with regard to the provisions that have been spelt out in the proposal of the implementation Action Plan of the States of Punjab and Haryana have been proposed. The various measures/plans, if implemented, in totality can bring about qualitative change in the way waste is handled in the city of Delhi especially the SDMC. However complete implementation also required allotment of lands for facilities for which SDMC has no control. The allotment of lands to the various departments is under the purview of the DDA/GNCTD. In addition, other measures such as the notification of Draft Sanitation Bye-Laws is also an issue requiring action at the level of GNCTD. On the issue of user charges, a policy decision needs to be taken by the Standing Committee/Corporation of SDMC.

1. In view of above, it is humbly requested the Hon'ble Court to may kindly direct the DDA to allot/hand-over the following two sites to South Delhi Municipal Corporation for Solid waste Management facility in first instance on urgent basis, as there is



no land available for development of Sanitary Land fill site/Processing Plant/Waste to Energy Plant in SDMC.


- i) Proposed site extension of existing SLF site Okhla, Phase-I on the land of CCI/CONCOR having approx. area  $14.2+18.15+97.0=129$  acres
- ii) Proposed site on Tekhand land near SLF Okhla, Phase-I having approx. area 36 acres.

It is also submitted that another important aspect which goes in favor, to continue with the present site is that to open any new Sanitary Land Fill site it is seen that there had been public resistance and in most of the cases new sites could not be started. In the present case since there exists a Sanitary Land Fill site, its extension in the area occupied by DDA may not invite much public resistance and as such the present site could be extended.

2. The Hon'ble Court is also humbly requested to kindly direct GNCTD to notify draft sanitation Bye-Laws on the most priority.

  
Executive Engineer (DEMS)  
South Zone, SDMC

Executive Engineer(SLF)/Okhla  
SDMC

  
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**SUB:-BRIEF NOTE ON TWO SITES. AS MENTIONED IN SUBPARA VI.OF SN.26 IN THE ACTION PLAN.**

**1. SITE EXTENSION OF EXISTING SLF SITE OKHLA PHASE-I ON THE LAND OF CCI/ CONCOR/NORTHERN RAILWAY.**

This site is located adjoining existing SLF site Okhla Phase-I, SDMC on the land of Cement Corporation of India Ltd. (CCI) and Container Corporation of India (CONCOR)/Northern Railway having area of about 129.35 acres on Maa Anand Mai Road.

The present site of CCI/CONCOR/Northern Railway can be patent site to continue use as Sanitary Land Fill site and for setting up of plant for processing/disposal of MSW in this area and as such our endeavor should be get the possession of entire 129.35 acres of land from CCI/CONCOR/Northern Railway.

Another important aspect which goes in favor to continue with the present site is that to open any new Sanitary Land Fill site it is seen that there had been public resistance and in most of the cases new sites could not be started. In the present case since there exists a Sanitary Land Fill site, its extension in the area occupied by CCI/CONCOR/Northern Railway may not invite much public resistance and as such the present site could be more viable.

It is also pertinent to mention here that it is observed that access of CONCOR is congested and most of the time there is traffic jam on the Maa Anand Mai Road due to plying of Containers Vehicles, resulting inconvenience not only to them, but also to the public at large.

Even from planning angle it is advisable that the CONCOR activities be setup out of the city/congested area, hence the CONCOR activities and its operation can be shifted to any other locations preferably in the NCR Borders/Delhi- Bombay Freight Corridor. This more will defiantly avoid movement of Heavy Containers on congested road and will also check the pollution level within the city. Besides this will also be for the benefits of public at large/local residents residing within the city.

It is also pertinent mention to here that the Secretary (Environment) Cum Chairman DPCC, GNCTD has sent a letter to the Chairman & Managing Director Container Corporation of India Ltd. vide his D. O. No. F10(176)/Env./ 2014/12410-12415 dated 1.8.2014 wherein it was mentioned

that High Powered Committee under Chief Secretary is looking at various steps to reduce air pollution levels in Delhi. During one of the meetings it was informed that Hon'ble Supreme Court has passed orders to stop non destined traffic from entering Delhi. Traffic Police has also reported that location of ICD at Tuglakabad is promoting such traffic by movement of containers. It was also requested that necessary steps be taken for shifting of Inland container Depots (ICDs) from Okhla/ Tuglakabad and Ghazipur to NCR region and an action taken report may kindly be sent to his Department.

It is also pointed out that Additional Secretary to Hon'ble LG informed that minutes of the meeting under the Chairmanship of Hon'ble Lt. Governor on 1.8.2014 at 11:30 AM at Raj Niwas to discuss on the suggestions of made by High Power Committee on Air & Water Pollution through letter no. U.O. No. 20(3)/14-RN/251/20248-65 dated 6.8.2014.

*"Hon'ble Lt. Governor advised to encompass rain water harvesting and the imposition of a congestion tax on vehicles in crowded areas, into Committee's suggestions. Hon'ble Lt. Governor instructed PWD to explore the feasibility of providing U-turn and underpass near borders to turn back the non-destined vehicles trying to enter the city and the Committee to examine the Law to force Container Corporation of India Ltd. (CONCOR) to shift the Inland Container Depots outside Delhi".*

It is also pertinent to mention that in the matter of Vardhaman Kaushik Vs. Union of India & Ors, O.A. No. 21 of 2014, the Hon'ble National Green Tribunal, Principal Bench, New Delhi vide its order dated 4.12.2014 and 19.1.2015 had issued various Directions, Vehicular Pollution and General directions. Out of General directions the direction no. 25 pertaining to the NCR Delhi, DDA, Railway Boards and SDMC and the same is reproduced below:-

i     *".... The NCR Delhi, DDA and Railway Boards shall consider shifting and / or bifurcating of three sites meant for Cargo containers i.e. Tughlakabad, Okhla and area close to Anand Vihar, where heavy containers depot have been located, 10 or 12 wheeler heavy trailers come to these areas and thus, cause serious traffic jams obstructing free flow of traffic, besides directly causing pollution I the air, If these sites are shifted or bifurcated at least in the area in the outskirts of NCR in consultation with the other States will help greatly in improving the air quality of NCR Delhi..."*

ii.....No Report has been submitted with regard to our directions relating to Tughlakabad, Okhla and area closed to Anand Vihar .Compliance report in this behalf has also not been submitted.

DDA is directed to file its report positively before the next date of hearing .....

Let Notice be issued to the Northern Railway to be present on the next date of hearing.

The proposal can be implemented if CCI/CONCOR/Northern Railway can be persuaded to part with the land in exchange of any other suitable piece of land, for which DDA can be requested.

## **2. SITE ON TEKHAND LAND NEAR SLF OKHLA PHASE-I.**

This site is located near existing SLF site Okhla Phase-I on Maa Anand Mai Road having area about 36 acres. The present site on Tekhand Land can be patent site to continue use as Sanitary Land Fill site and for setting up of plant for processing/disposal of MSW in this are and as such our endeavor should be get the possession of entire 36 acres of land from DDA.

Another important aspect which goes in favor to continue with the present site is that to open any new Sanitary Land Fill site it is seen that there had been public resistance and in most of the cases new sites could not be started. In the present case since there exists a Sanitary Land Fill site, its extension in the area occupied by DDA may not invite much public resistance and as such the present site could be extended.

The plot in question measuring 14.3 hect. at Tehkhand was auctioned by DDA for construction of 3500 EWS houses and 750 houses under higher income category under Public Private Partnership model to M/s. Kenneth Builders & Developers Ltd. and the physical possession of the same was handed over to them in the year 2006. The developer could not take up the construction work due to not getting all the necessary clearances from the concerned departments. As on date, the SLF no. 35374/2010 is pending before Hon'ble Supreme Court of India.

The above said scheme now has been closed. The matter of payment of compensation remains which can be decided by the court and irrespective of which the land can be utilized for public facilities as stated above for which DDA can take appropriate steps before Hon'ble Court if require

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Amendment

दक्षिणी दिल्ली नगर निगम

**Subject:- The Delhi Municipal Corporation Sanitation and Public Health Bye-Laws-2014.**

A meeting under the Chairmanship of Secy./UD, GNCTD was held on 22/9/14 to review the status of finalization of draft "Delhi Municipal Corporation Sanitation and Public Health Bye-Laws-2014". During the meeting, the matter was deliberated at length and as suggested in the meeting, a draft for amendment in Section 482 and 12<sup>th</sup> Schedule of Delhi Municipal Corporation Act, 1957 has been prepared by Law Department, SDMC.

The same is placed opposite for approval and onward submission to Secy./UD, GNCTD.

*[Signature]*  
Chief Engineer (HQ)

Commissioner/SDMC

*[Signature]*  
26.9.14

Secy (UD)/GNCTD.

No. D/Secy/14-15/2472  
dt 26/9/14

SDMC.

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**THE DELHI MUNICIPAL CORPORATION (AMENDMENT) BILL, 2014**

**BILL**

**Further to amend the Delhi Municipal Corporation Act, 1957**

BE it enacted by the Legislative Assembly of the National Capital Territory of

Delhi.

In the Sixty Fourth Year of the Republic of India as follows:

1. Short title and commencement. – (1) This Act may be called the Delhi Municipal Corporation (Amendment) Act, 2014.
- (2) It shall come into force from the date of notification of this Act in the official Gazette.

**2. AMENDMENT OF SECTION 482**

In the Principal Act in sub section (1) of section 482 wherever the word 'five hundred' occurs be substituted by the word " ten thousand" and wherever the word " Twenty " occurs shall be substituted by the word " two hundred".

**3. AMENDMENT IN 12<sup>TH</sup> SCHEDULE**

In the Principal Act of 12<sup>th</sup> Schedule of the existing entries headed as 'fine or imprisonment' which may be imposed and ' Daily fine' which may be imposed, shall be substituted as per Annexure A

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ANNEXURE-A

Section, sub-section, clause or proviso	Subject	Fine or Imprisonment which may be Imposed	Daily Fines which may be Imposed
		₹	
Section 353	Failure to provide for collection, removal and deposit of refuse and provision of receptacles.	Upto 10000	
Section 354	Failure to collect and remove filth and polluted matter	Upto 10000	
Section 355, sub(2)	Scavenger's duties in certain cases not to be discharged by any person without permission.	Upto 10000	
Section 356	Failure to comply with requisition for removal of rubbish etc., from premises used as market, etc.	Upto 10000	200
Section 357, sub(1)	Keeping rubbish and filth for more than twenty-four hours, etc.	Upto 5000	
Section 357, sub(2)	Allowing filth to flow in streets	Upto 10000	
Section 357, sub(3)	Depositing rubbish or filth, etc., in street, etc	Upto 1000	200
Section 360, sub(1)	Latrines and urinals not to be constructed without permission or in contravention of terms prescribed.	Upto 5000	
Section 161, sub(1)	Failure to provide buildings newly erected or re-erected with latrine, urinal and other accommodation.	Upto 5000	

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Section 361, sub(3)	Failure to provide residential buildings composed of separate tenements with latrine, bathing or washing place for servants on the ground floor.	Upto 5000	
Section 362	Failure to provide latrines for premises used by large number of people and to keep them clean and in proper order.	Upto 10000	200
Section 363	Failure to comply with requisition to provide latrines for market, cattle shed, cart stand, etc., and to keep them clean and in proper order	Upto 10000	200
Section 364, clauses (a), (b), (c) and (d)	Failure to comply with requisition to enforce provision of latrine or urinal accommodation, etc.	Upto 5000	200
Section 365, sub(2)	Failure to comply with requisition for removal of congested buildings.	Upto 5000	
Section 366	Failure to comply with requisition to improve buildings unfit for human habitation.	Upto 10000	
Section 368, sub(1), (2), (3) & (4)	Failure to comply with order of demolition of buildings unfit for human habitation.	Upto 5000	
Section 369	Failure to comply with requisition of the Commissioner to remove insanitary huts and sheds, etc.	Upto 5000	200
Section 370, sub(1)	Prohibition against washing by washermen.	Upto 5000	
Section 371	Failure to give information of dangerous disease.	Upto 5000	

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Section 373	Failure to comply with requisition to cleanse and disinfect buildings or articles.	Upto5000	
Section 374	Failure to comply with requisition to destroy infectious huts or sheds.	Upto5000	
Section 375	Washing of clothing, bedding, etc., at any place no notified by the Commissioner	Upto10000	
Section 377, sub(1)	Sending infected clothes to washerman or laundry	Upto5000	
Section 377, Sub(2)	Failure to furnish address of washerman or laundry to which clothes have been sent.	Upto5000	
Section 378, sub(1), (2), and (3)	Use of public conveyances by persons suffering from a dangerous disease, etc.	Upto10000	
Section 380	Failure to disinfect buildings before letting the same	Upto5000	
Section 381	Disposal of Infected articles without disinfection.	Upto10000	
Section 382	Making or selling of food, etc., or washing of clothes by infected persons.	Upto10000	
Section 383	Sale of food or drink in contravention of restriction or prohibition of Commissioner.	Upto10000	
Section 387 sub(1) & (2)	Absence of sweepers etc., from duty without notice.	No change	
Section 397, sub(1), (2), & (3)	Commission of nuisances.	Simple Imprisonment which may extend to six months or with fine which may extend to Rs. 10000 or with both	
Section 398	Failure to comply with requisition for removal or abatement of nuisance.	Upto 5000	200

Sub: - BEFORE THE HON'BLE HIGH COURT FOR DELHI TITLED AS ALMITRA H. PATEL AND ANR. V/S UNION OF INDIA & OTHERS, CWP NO. 5236/2010.

Ref: - LIST OF 31 SITES IDENTIFIED/RECOMMENDED BY THE COMMITTEE.

S. No	Name of Site	Approx. Area of land (In Acres)	Ownership of land	Purpose	Jurisdiction of Corporation	Remarks
1.	Site near village Ghitorni	184	Forest Deptt.	Processing/ disposal of inert material/ C&D Waste	SDMC	GNCTD should hand over the site to SDMC.
2.	Site near village Mandi/ Jounapur	59	Forest Deptt.	Processing/ disposal of inert material/ C&D Waste	SDMC	GNCTD should hand over the site to SDMC
3.	Site near Jounapur Pahari on Mandi road	100	Gaon Sabha	Processing/ disposal of inert material/ C&D Waste.	SDMC	GNCTD should hand over the site to SDMC
4.	Bhatti Mines	2500	Forest Deptt.	Processing/ disposal of MSW/Inert Material	SDMC	About 500 acres of land be allotted/handed over to SDMC by GNCTD.
5.	Site extension of existing SLF site Bhalswa Ph-I on the land of CONCOR and CCI.	129.35	CONCOR/ Northern Railway	Most suitable for Integrated Waste Processing/ Disposal Facilities	SDMC	DDA should hand over the land to SDMC.

6.	On Takhand land near SLF Bhalswa Ph-I	36	DDA	Most suitable for Integrated Waste Processing/ Disposal Facilities	SDMC	DDA should hand over the land to SDMC.
7.	Site near Metro Station (under construction) opposite Kalandi Kunj	32	DDA	Processing /disposal of C&D Waste/inter material	SDMC	DDA should hand over the land to SDMC.
8.	Near Chatter Pur Phari	05	DDA	Processing/ disposal of C&D Waste/Inert material	SDMC	DDA should hand over the land to SDMC.
9.	Site near resettlement colony Madan Pur Khadar	200	Private	Integrated Waste Processing/ Disposal Facilities	SDMC	About 100 acres of land be acquired by DDA/GNCTD and the same be handed over to SDMC.
10.	Site near Sewage Treatment Plant in Sector-16-D, Dwarka Phase-II.	10	DDA	Setting up of Compost Plant.	SDMC	Pending for future
11.	Site near IGNOU Back of Maidan Garhai	20	DDA	Decentralization of MSW Management.	SDMC	Pending for future
12.	Site near Rang Puri	20	Forest Department	Decentralization of MSW Management	SDMC	Pending for future

13.	Site between Chawala Village and Najafgarh Drain	10	DDA	Decentralization of MSW Management.	SDMC	Pending for future
14.	Site near village Neelwal	Chunk Land	Private	Integrated Waste Processing/ Disposal Facilities	SDMC	About 100 acres of land be acquired by DDA/GNCTD and the same be handed over to SDMC.
15.	Site near village Hiran Kudna	Chunk Land	Private	Integrated Waste Processing/ Disposal Facilities	SDMC	About 100 acres of land be acquired by DDA/GNCTD and the same be handed over to SDMC.
16	Site near village Nilothi	Chunk Land	Private	Integrated Waste Processing/ Disposal Facilities	SDMC	About 100 acres of land be acquired by DDA/GNCTD and the same be handed over to SDMC.
17.	Site near village Bakkarwala	Chunk Land	Private	Integrated Waste Processing/ Disposal Facilities	SDMC	About 100 acres of land be acquired by DDA/GNCTD and the same be handed over to SDMC.
18	Site near village Saffidpur Ranholla	Chunk Land	Private	Integrated Waste Processing/ Disposal Facilities	SDMC	About 100 acres of land be acquired by DDA/GNCTD and the same be handed over to SDMC.
19.	Site near Sultanpur Dabas (Bawana)	95	Gaon Sabha	Integrated Waste Processing/ Disposal Facilities	North DMC	GNCTD should hand over the land to North DMC.

20.	Site near Puthkurd	145	Private	Integrated Waste Processing/ Disposal Facilities	North DMC	Land be acquired by DDA/GNCTD and the same be handed over to North DMC.
21.	Site behind APMC compost Plant on GT Karnal Road and near village Hamirpur	27.5	Private	Processing/ Disposal of MSW	North DMC	Land be acquired by DDA/GNCTD and the same be handed over to North DMC.
22.	Site on the Main Bhaktawar pur road near Palla Village	42.5	Private	Processing/ Disposal of C&D Waste	North DMC	Land be acquired by DDA/GNCTD and the same be handed over to North DMC.
23.	Site located near village Palla and Haryana Border	62.5	Private	Processing/ Disposal of MSW	North DMC	Land be acquired by DDA/GNCTD and the same be handed over to North DMC.
24.	Site near village Sadpur and Nizampur	Chunk Land	Private	Integrated Waste Processing/ Disposal Facilities	North DMC	About 100 acres of land be acquired by DDA/GNCTD and the same be handed over to North DMC.
25.	Site near PVC Godown on Tikri Road near village Mundka	Chunk Land	Private	Integrated Waste Processing/ Disposal Facilities	North DMC	About 100 acres of land be acquired by DDA/GNCTD and the same be handed over to North DMC.

26.	Site near village Bajitpur near Auchandi Road	08	Gaon Sabha	Processing of C&D Waste	North DMC	GNCTD should hand over the land to North DMC.
27.	Near Shastri Park (2 Acres)	02	DDA	Processing of C&D Waste	EDMC	This land has been handed over to EDMC by DDA.
28.	In front of DTC Bus Depot Yamuna Vihar	10	DDA	Solid Waste Management facility	EDMC	DDA should hand over the land to EDMC.
29.	Site near Delhi Police Training Complex, Sonia Vihar (large chunk of land)	50	DDA	Integrated Waste Processing/ Disposal Facilities	EDMC	DDA should hand over the land to EDMC.
30.	Near Collage on Wazirabad Road (a large chunk of land)	10	DDA	Solid Waste Management facility	EDMC	DDA should hand over the land to EDMC.
31.	Site near Khichari Pur	2.5	DDA	Solid Waste Management facility	EDMC	DDA should hand over the land to EDMC.

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Ex. Engineer (DEMS)  
South Zone, SDMC

Annexure-C

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**East Delhi Municipal Corporation**  
Office of Superintending Engineer (EMS)  
419, Udyog Sadan, Patpar Ganj Indl. Area,  
Delhi-110092

O/o Secretary Urban Development  
Govt. of NCT of Delhi  
21 APR 2014  
Dy. No. DWA/2015/1754



No.: D-08/SE(EMS)/EDMC/2015-16

Dated: 17.4.2015

To,

The Principle Secretary  
Urban Development, Govt. of Delhi  
9th Level, Delhi Secretariat  
New Delhi - 110002

hm  
22.4.15. JS M.A.  
15/2/15

**Subject:- Action Plan for Management and Handling of Municipal Solid Waste Using Modern Technologies in East Delhi Municipal Corporation (EDMC) for submission before the Hon'ble National Green Tribunal at Delhi in the matter of Almitra H. Patel & Anr. Vs Union of India and Ors. O.A. No. 199 of 2014**

Please find enclosed herewith Action Plan for Management and Handling of Municipal Solid Waste Using Modern Technologies in East Delhi Municipal Corporation (EDMC) for submission before the Hon'ble National Green Tribunal at Delhi in the matter of Almitra H. Patel & Anr. Vs Union of India and Ors. O.A. No. 199 of 2014.

Encl: As above

**Superintending Engineer (EMS)**

Copy to:-

1. Member Secretary, Delhi Pollution Control Committee (DPCC), Department of Environmental, Govt. of NCT of Delhi, 4th Floor, ISBT Building, Kashmiri Gate, Delhi - 110006
2. CE (EMS)
3. Office Copy

**Superintending Engineer (EMS)**

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Subject:- Almitra H. Patel & Anr Vs UOI & Ors O.A. No. 199/2014 (NGT Case).  
**Action Plan for Municipal Solid Waste.**

**CHAPTER - 1: INTRODUCTION**

The task of managing Municipal Solid Waste (MSW) collection, transfer and transportation in EDMC as per MSW (M&H) rules 2000, is proving to be cumbersome for EDMC due to its densely populated and a lack of civic sense among the residents.

The Solid Waste Management comprises of collection, transportation and disposal of Municipal Solid Waste. Safai Karamcharies deployed by the EDMC do the sweeping, desilting of small drains (4' or below in Width & Depth) and collect the garbage/silt from various roads, side-lanes etc. and bring the same to the municipal receptacles. Garbage from dhalao is loaded to tipper truck through a loader. From these dustbins/dhalaos the garbage is transported to the SLF site situated at Ghazipur. The garbage is transported by tipper trucks from different parts, and the same is dumped and leveled at the SLF site. In addition EDMC also does construction and cleaning of community toilets complexes and public urinals. Street sweeping work is carried out manually and the swept material is deposited in dhalao located at different places under jurisdiction of EDMC.

**OBJECTIVE**

- The Ideal objective is to achieve 100% segregations at household level and zero garbage at ward level
- Decentralize Solid Waste Management
- Reduce Transportation Cost & Environmental Degradation
- Avoid dumping of Garbage at Landfills to reduce GHG Emission
- Minimize Requirement of Land for waste handling

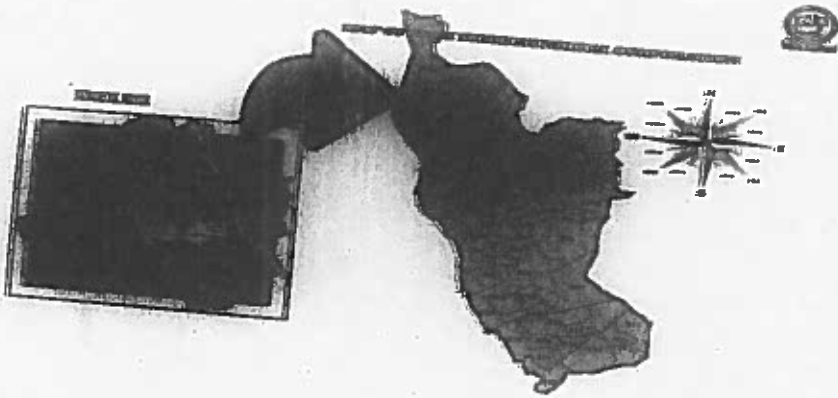
**CHAPTER - 2: CITY PROFILE**

2.1 General Profile (including city map):

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EDMC is an eastern suburb of Delhi. It forms a part of both East and Northeast Delhi. It is divided in two Zones, namely, Shahdara North & Shahdara South. Shahdara North has a total area of approx. 46.06 sq. km with a population around 17 lacs (1.7 million), whereas, Shahdara South has a total area of 59.92 sq. km. with the population around 22 lacs (2.2 million). The population density is over 37000 per sq.km.

- 2.2 Historical Profile: EDMC bounded by river Yamuna on one side and UP on other side. Part of the city is very old and haphazardly developed. This is thickly populated area having narrow lanes etc.
- 2.3 Tourist, religious or any other specific Profile of the city:

**Akshardam Temple located near Noida Crossing :-** The Swaminarayan Akshardham Temple, a 100 acre complex of Indian Art, culture and heritage is made of pink sandstone and white marble. Entry to the temple is free, but a ticket is charged if one wants to visit the exhibition halls and take the boat ride.

**Commonwealth Games Village:-** The 2010 Commonwealth Games Village was the athletes' residence for the 2010 Commonwealth Games in New Delhi. The village is spread over an area of 63.5 hectares

**Yamuna Sport Complex :-** The Yamuna Sports Complex is a sports complex located in New Delhi, India. Inaugurated in 1999, it hosts table tennis, Rugby 7's, Boxing, Wrestling. It is owned by the Delhi Development Authority. It was a venue for the 2010 Commonwealth Games

**Sanjay Lake:-** Long before the trans yamuna (now known as East Delhi) area, thus called because it lied across the Yamuna River from the main city of New Delhi, was colonized by the government, this was natural low-lying area, land depression where rainwater collected, which was also fed by excess run-off from a cut in the Hindon River.

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The area had a number of villages like Patparganj in the floodplains of Yamuna and vast agricultural lands.

Initially the lake spread over 89 acres and together with the surrounding park it covered an area of 178 acres. However it was greatly shrunk after DDA started developing the area for its housing colonies, as colonies like Mayur Vihar, Indraprasta Extension (I.P. Extn.), and Patparganj DDA colonies started coming up in the 1980s and its catchment area was largely built over. Similarly, when National Highway 24 (NH 24) was built to connect the national capital to Capital of Uttar Pradesh state, Lucknow, which cut through the lake, and the Nizamuddin bridge was built over the Yamuna and its northern portion was lost and lake was reduced to present 69 hectares (170 acres). In the following decades, as land pressure increased in East Delhi, the lake further shrunk due to unauthorised construction, encroachment and sewage from near by slums.

2.4 Area and Population:

S.	Organisation	Area (in Sq Km)	Population (in Lacs)	Population Density (No.Per sq. km.)
1	NCT DELHI	1484.46	168[Approx]	11317
2	MCD	1399.26 (94%)	161.2 (96%)	11520
3	EDMC	105.98 (7%)	40.0 (24%)	37743
4	SDMC	656.91 (44%)	59.2 (35%)	9012
5	NDMC	636.37 (43%)	62.0 (37%)	9743

Area of the city/ town (under the jurisdiction of the local body) in Sq. Km.

Details of Population

Census Year	Population			Projected population 2011
	1981	1991	2001	
Population	10.5 Lacs	16.6 Lacs	26.00 Lacs	40.00 Lacs
Decadal growth	-	6.1 Lacs	9.4 Lacs	14.00 Lacs

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