



दिल्ली नगर निगम

MUNICIPAL CORPORATION OF DELHI

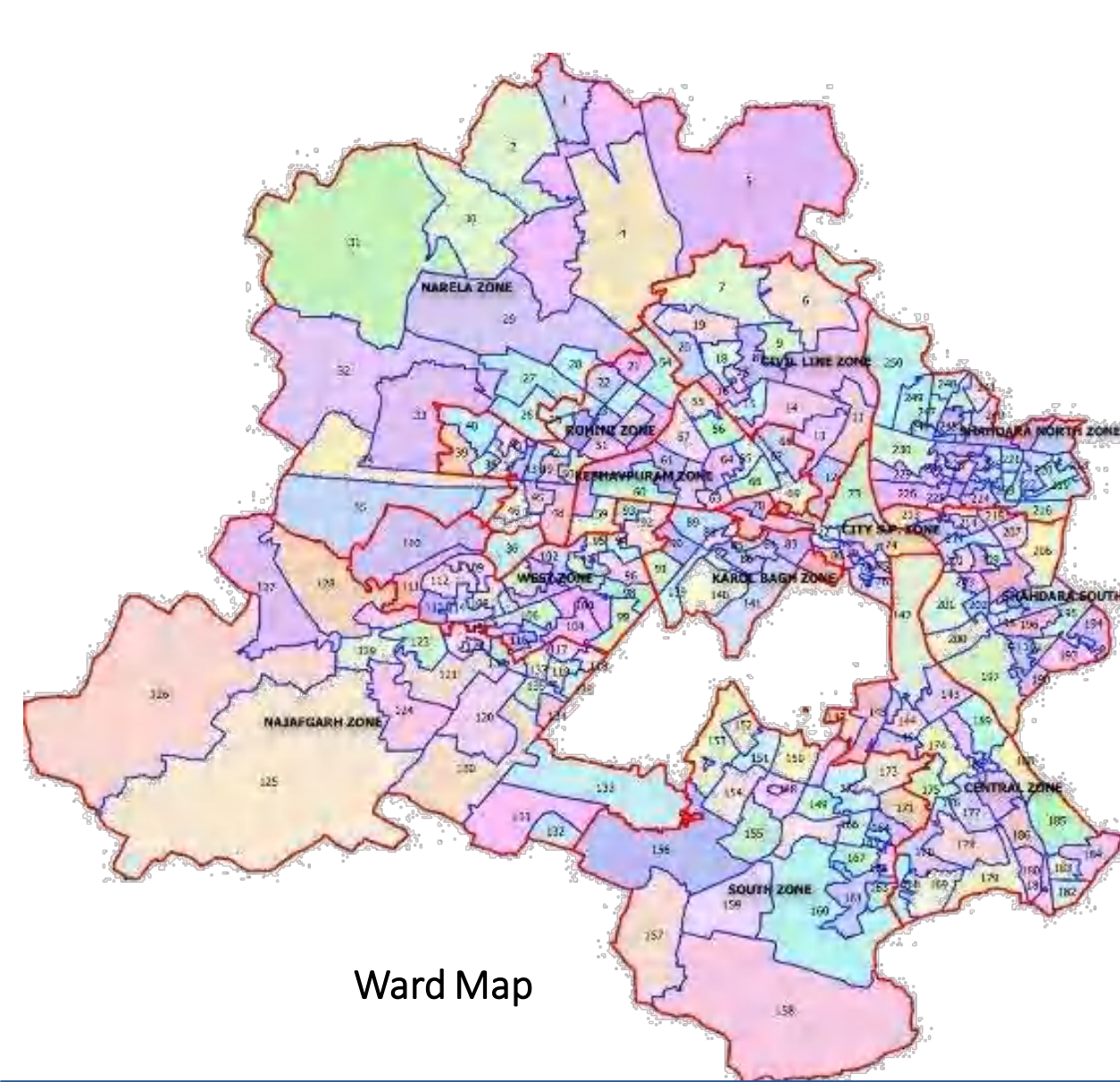


SOLID WASTE MANAGEMENT IN MCD



Hon'ble National Green Tribunal (O.A. No. 606/2018)

- Regarding “Compliance of Municipal Solid Waste Management Rules, 2016 and other environmental issues”
- Delhi was heard by Hon'ble NGT on 16.02.2023 in presence of the Chief Secretary, GNCTD.
- Detailed Action Plan with timelines prepared and Order issued dated 06.04.2023.

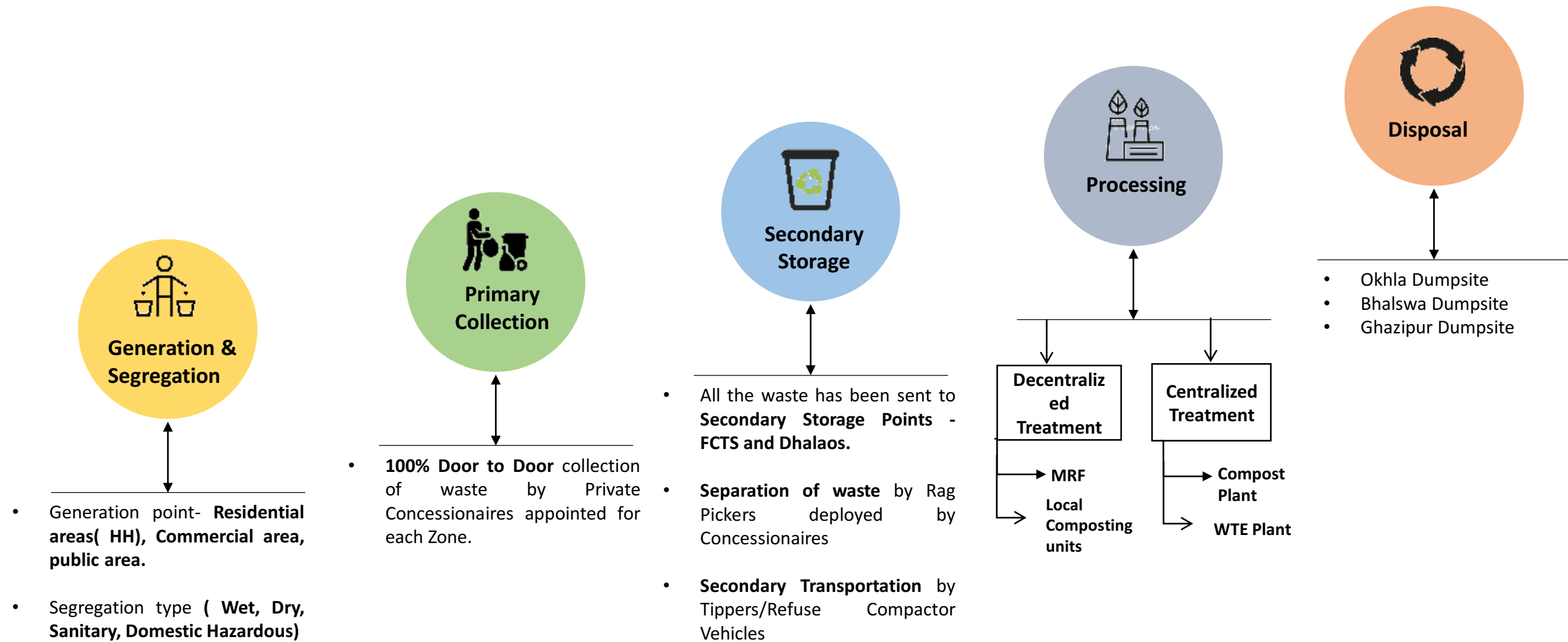


S. No.	Particulars	Numbers
1	Population (2011 Census)	192 Lacs
2	Area (sq km)	1366.89 (MCD) 1484 (Delhi) (94.27%)
3	No of Households (2011 Census)	43 Lacs
4	No. of Wards	250
5	No. of Zones	12
6	MSW Generation in TPD	11000
7	Wet Waste in TPD	4400 (40%)
8	Dry Waste in TPD	6600 (60%)
9	Domestic Hazardous Waste (in TPD)	0.11 (0.001%)
10	MSW Processing Capacity in TPD	8171 (74%)
11	Gap in MSW Processing Capacity in TPD	2834 (26%)

UPSTREAM

MIDSTREAM

DOWNSTREAM

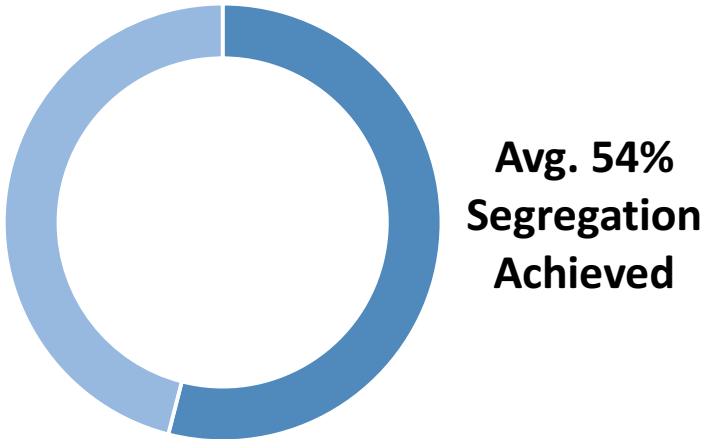


Order Para No. 3.1. & 3.2

Direction
“Since ward-wise accountability for 100% segregation of MSW at source needs to be ensured, therefore, MCD to submit ward-wise timelines and responsible officers by 15th April, 2023 to the Convener of the SWMC for Solid Waste Monitoring.” 100% collection shall be continuously ensured, without fail. A performance audit shall be completed by 30th September, 2023 by all ULBs”

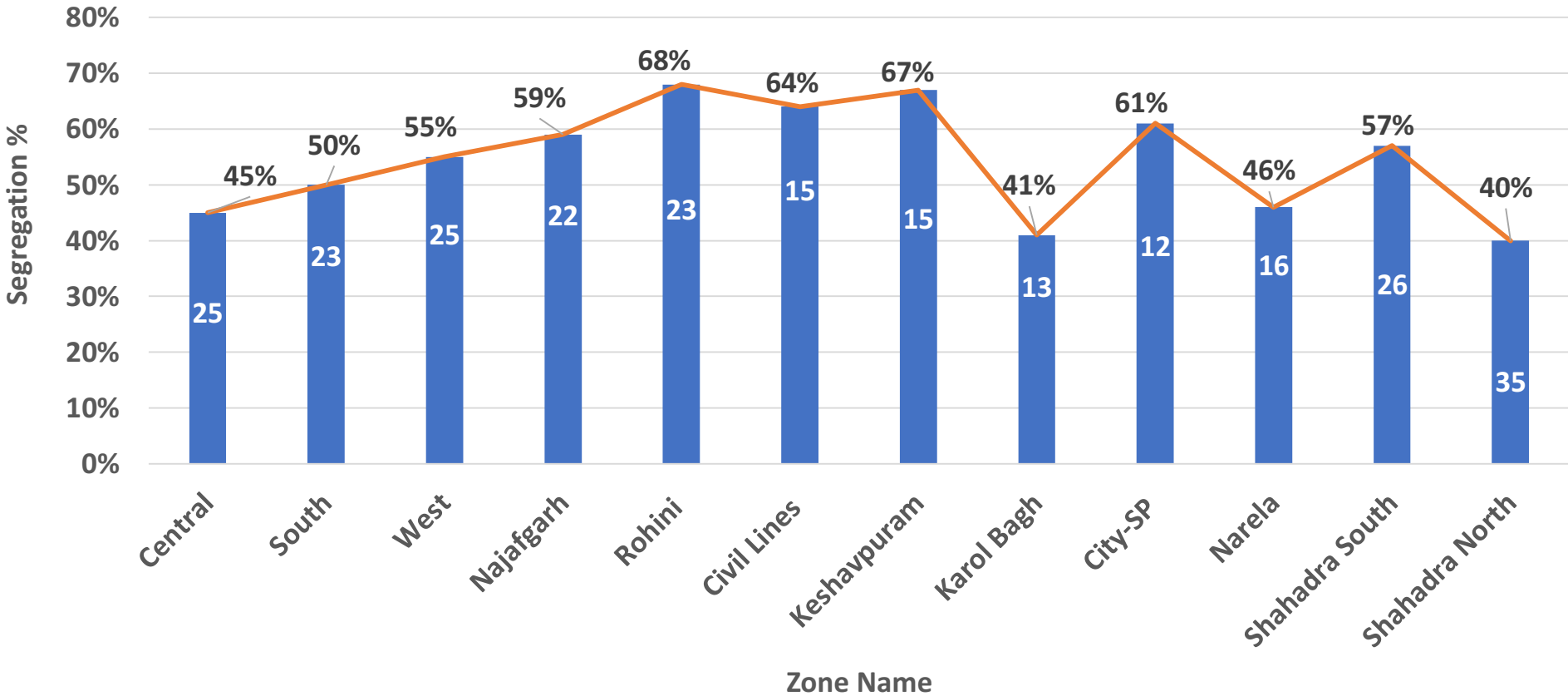


100 % Collection



Waste Segregation at Source – Status & Timelines

Avg. 54% Segregation Achieved



No. of Wards - 250

Timeline for 100% waste segregation at source

- 75% - March 2024
- 100% - December 2024

Zone Wise Waste Generation, Collection & Transportation

S. No.	Zone	No. of Wards	Daily Garbage Generated (in TPD)	Agency / Concessionaire	Disposal Point
1	Central	25	1000	M/s DDSIL	Tehkhand WtE + Okhla WtE
2	South	23	900	M/s SSIL	Tehkhand WtE + Okhla WtE
3	West	25	900	M/s A2Z Enviro	Tehkhand WtE + Okhla WtE
4	Najafgarh	22	900	M/s DWMN	Tehkhand WtE + Okhla WtE
5	Rohini + Part Narela	23	950	M/s DMSWSL	Bawana WtE
6	Civil Lines + Part City-SP	15	800	M/s DMSWSL	Bawana WtE
7	Keshavpuram	15	800	M/s DMSWSL	Bawana WtE
8	Karol Bagh	13	850	M/s Metro Waste	SLF Bhalswa
9	City-SP	12	950	M/s AG Enviro	SLF Bhalswa
10	Narela	16	500	M/s IPMSWSL	SLF Bhalswa
11	Shahadra South	26	1200	M/s Metro Waste	Ghazipur SLF + Wte Okhla
12	Shahadra North	35	1250	M/s Metro Waste	Ghazipur SLF + Wte Okhla
	Total	250	11000		

100% Collection of MSW

Order Para No. 3.4

Direction

Zone wise number of vehicles without GPS facility along with timelines for installing GPS and officers responsible for the same shall be provided by MCD by 15th April, 2023.

Dashboard shall be placed in public domain for transparency and community engagement by 31st July, 2023.

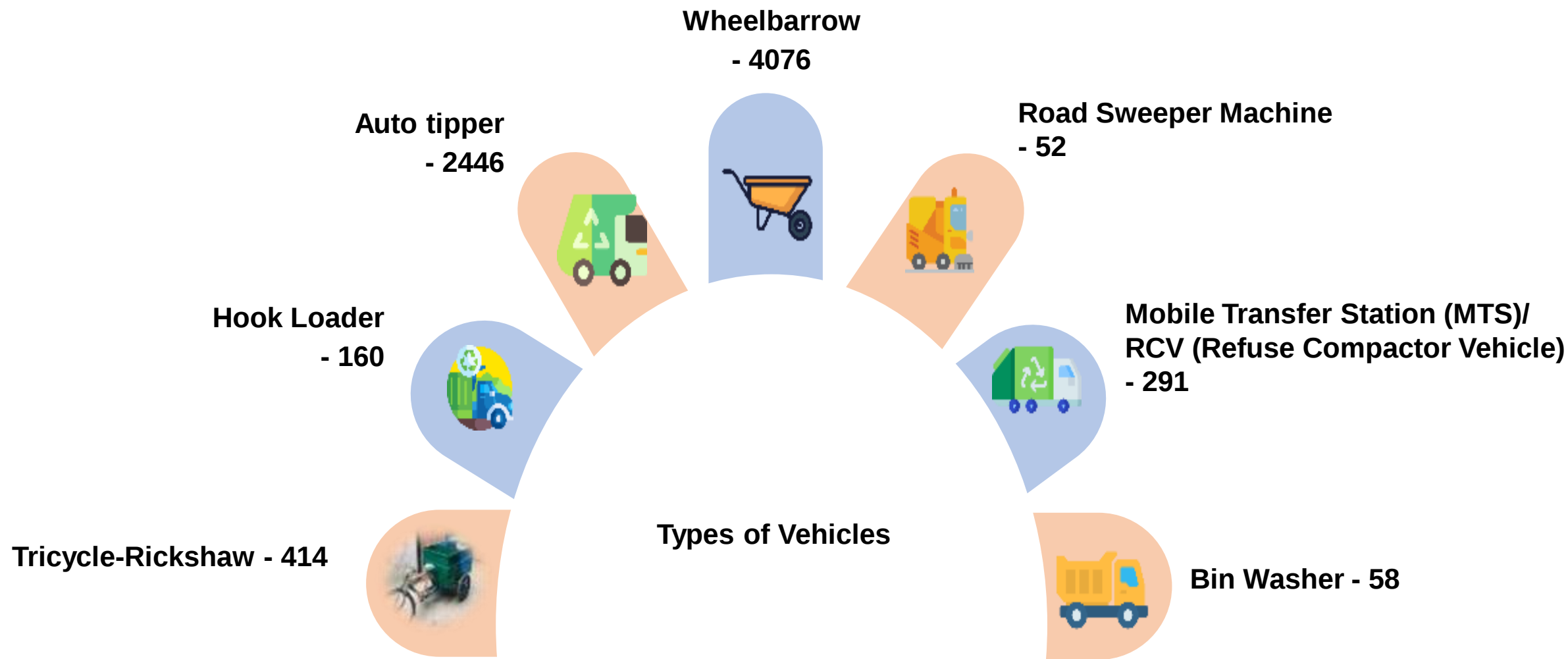
Status:



All the mechanized vehicles are equipped With GPS



Dashboard shall be placed in public domain for transparency and community engagement by 31st January, 2024



ALL THE MECHANIZED VEHICLES ARE EQUIPPED WITH GPS



Refuse Compactors



Auto Tipper

Vehicle Type	SZ	CNZ	WZ	NJZ	KBZ	RZ	KPZ	CLZ	CSP	SNZ	SSZ	NZ	TOTAL
Auto Tipper	284	424	261	279	213	96	73	67	222	196	192	139	2446
MTS	31	22	Included in RCV	37	Included in RCV	Included in RCV	Included in RCV	Included in RCV	Included in RCV	Included in RCV	Included in RCV	Included in RCV	90
Hook Loader	16	17	20	19	15	9	7	10	18	10	11	8	160
RCV	6	12	38	8	25	2	2	2	23	38	38	7	201
Cycle/ E- Rikshaw	87	157 47 (E)	97	-	75 (E)	28	26	19	75 (E)	38 (E)	38 (E)	5 (E)	414 E – 278
Three wheeler	-	-	49	-	-	-	-	-	-	19	19	-	87
Bin Washer	3	4	2	6	2	1	-	1	2	17	18	2	58
Wheel Barrow	650	875	91	332	195	551	412	193	40	-	-	737	4076
Road Sweeping Machines	7	7	5	8	2	4	5	3	2	2	5	2	52

Dashboard shall be placed in public domain for transparency and community engagement by 31st January 2024

Order Para No. 3.3

Direction	Status
“MCD submitted that the corporation shall ensure closure of existing 638 dhalaos by 31st December 2024 and some dhalaos are planned to be retained for disposal of silt and street sweeping waste. The ward wise detailed timelines and responsible officers as well as number of dhalaos planned to be retained shall be submitted by MCD by 15th April, 2023 to the Convenor of the SWMC for Solid Waste Monitoring.”	Around 944 no. of dhalaos have been closed out of 1495 dhalaos. Now, 551 no. of dhalaos are operational and will be kept for the setting up of small MRF, storage of sweeping waste & silt, FCTS etc. and other small waste processing facilities.

Secondary Storage / Material Recovery Facilities



Dhalao as well-equipped restrooms for Sanitation workers



Dhalao as Milk Booth



Dhalao converted into RRR Center in Keshavpuram zone



Dhalao at Andheria Mod village, Vasant Kunj

S. No.	Particulars	Nos.
1	Total No. of Dhalaos	1495
2	No. of Operational Dhalaos	551
3	No. of Dhalaos Closed & put for an alternative use	944
4	No. of Dhalaos to be retained for sweeping waste & silt	250

Alternative Use of Dhalaos

- Amul Milk Booth
- MRF & RRR Centres
- EV Infrastructure (IGL)
- Library
- Reading Room
- Training Centre for less privileged women & Children
- Safaikaramchari Shelter
- Senior Citizen Recreation Centre
- Decentralized Composting Pits

Secondary Storage / Material Recovery Facilities



No. of Operational FCTS	No. of Proposed FCTS	No. of FCTS under Construction
294	25	17

Order Para No. 3.5.1

Direction	Status
Urban local bodies shall get a professional assessment on the requirement of MRFs completed by 30th June, 2023 as per extant rules and regulations.	A proposal for the policy to construct MRF is under process. MCD has assessed the requirement of 8 no. of MRF of 110 TPD capacity at different location based on land availability. Additionally, industrial areas are being explored for the setup of MRF in vacant plots through the joint survey with DSIIDC, DDA and MCD.

Sorting and recovery of recyclables (MRFs)



MRF Swachhta Kendra Dwarka Sector-29



MRF Zakhira

SI No	Location of MRF	Capacity (in TPD)	Type of MRF
1	Geeta Colony	2	Semi-Automatic
2	Patparganj Industrial area Opp. Hasanpur Depot	3	Semi-Automatic
3	Dilshad Colony near Suraksha Nursing Home	2	Semi-Automatic
4	Dwarka Sector-29	5	Automatic
5	Raghubir Nagar	15	Semi-Automatic
6	Zakhira	8	Semi-Automatic
7	150 nos. MRF at various FCTS/ Dhalaos	218	Manual
Total Capacity in TPD		253	

A proposal for the policy to construct MRF is under process. MCD has assessed the requirement of 8 no. of MRF of 110 TPD capacity at different location based on land availability.

Additionally, industrial areas are being explored for the setup of MRF in vacant plots through the joint survey with DSIIDC, DDA and MCD.\

S.No.	Projects	Capacity (TPD)
1	WTE Plant at Okhla (01)	1550
2	Integrated MSW Processing Facility at Narela-Bawana	2500
3	WTE Plant at Ghazipur (01)	1300
4	WTE Plant Tehkhand (01)	2000
5	Composters (20)	20
6	Decentralized Compost Pits (211)	543
7	Material Recovery Facilities (MRFs)	
8	A) 150 nos. at FCTS/Dhalaos maintained by C&T Concessionaire	218
	B) By NGOs etc-	
	• Geeta Colony	IPCA
	• Patparganj Industrial area Opp. Hasanpur Depot	IPCA
	• Dilshad Colony near Suraksha Nursing Home	IPCA
	• Dwarka Sector-29	UNDP
	• Raghbir Nagar	ITC WOW
	• Zakhira	Chintan
	TOTAL	8171

- The **compost produced** at local composting units have been utilized in parks or by some RWAs, schools/ institutions etc.
- The centralized composting plants of MCD are run by private players on PPP basis which have tied up with fertilizer companies i.e. KRIBHCO, INDORAMA etc. for **selling of compost**.

Existing WTE Plants



WTE Plant of 1950 TPD capacity at Okhla



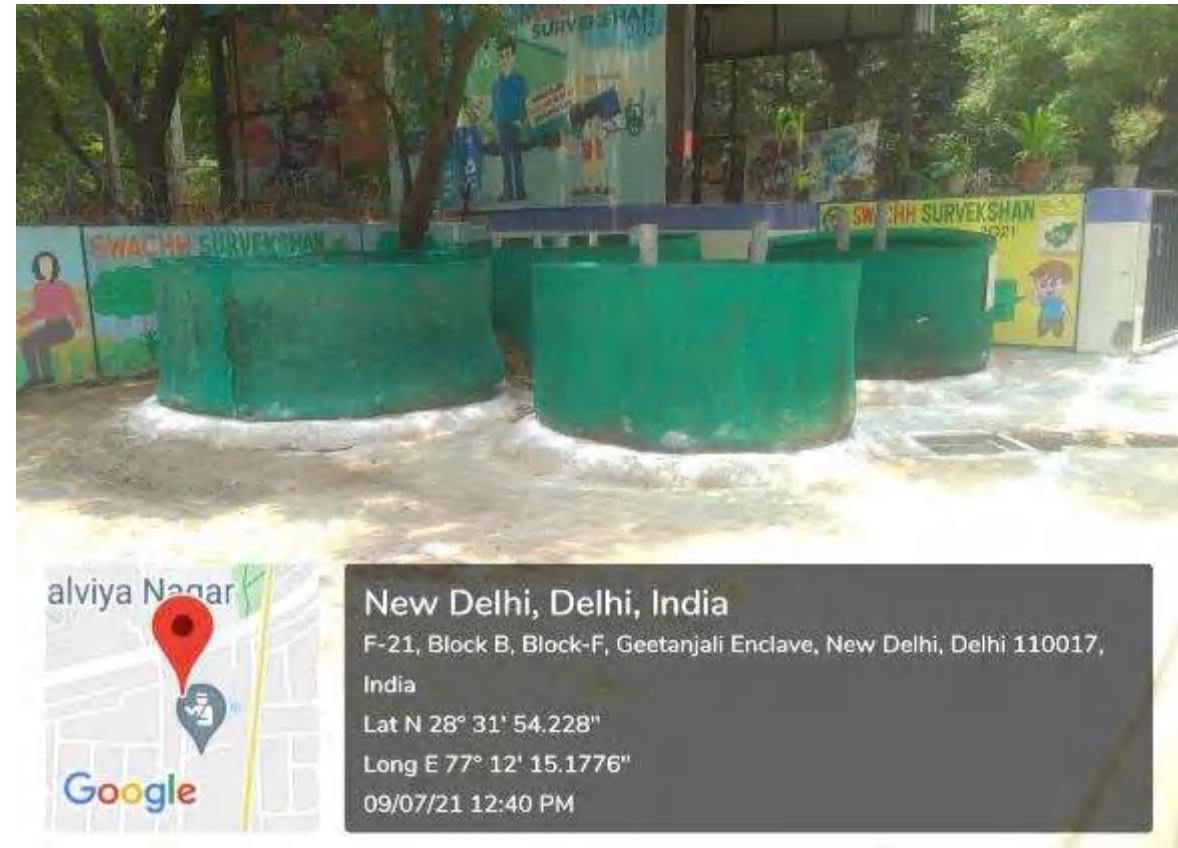
WTE Plant of 1300 TPD capacity at Ghazipur



Integrated MSW Processing Facility at Narela-Bawana (RDF based WtE) of 2500 TPD capacity



WTE Plant of 2000 TPD Capacity at Tekhand



Proposed Waste Processing Facilities

S. No.	MSW Facility	No (s)	Location	Capacity (in TPD)	Expected Timeline for Completion
1	Waste to Energy Plant at Narela - Bawana	1	Narela – Bawana	3000	2026
2	Waste to Energy Plant Ghazipur	1	Ghazipur	2000	2027
3	Expansion of existing WtE of 1950 TPD at Okhla to 2950 TPD	1	Okhla	1000	December 2025*
4	Expansion of existing WtE of 2000 TPD at Tekhand to 3000 TPD	1	Tekhand	1000	December 2026**
4	Bio CNG Plant	1	Okhla	300	June, 2024
5	Compressed Bio Gas (CBG) Plant	1	Ghogha Dairy	100	December, 2024
6	Composters of 1 TPD capacity each	1	Vishwas Nagar	1	January 2024
		1	New Ashok Nagar	1	
TOTAL				7402	
7	Bio Gas Plants for Dairies Waste Management	1	Goyla dairy	215	March 2024
		1	Ghoga Dairy	290	March 2024
		1	Nangli Dairy	215	Test Commissioning started in October 2023
8	Engineered Sanitary Landfill (SLF)	1	Tehkhand		December, 2023

* EC for expansion accorded, fixation of revised tariff is pending in DRC

** EC and fixation of revised tariff to be obtained

Future Plan for SWM

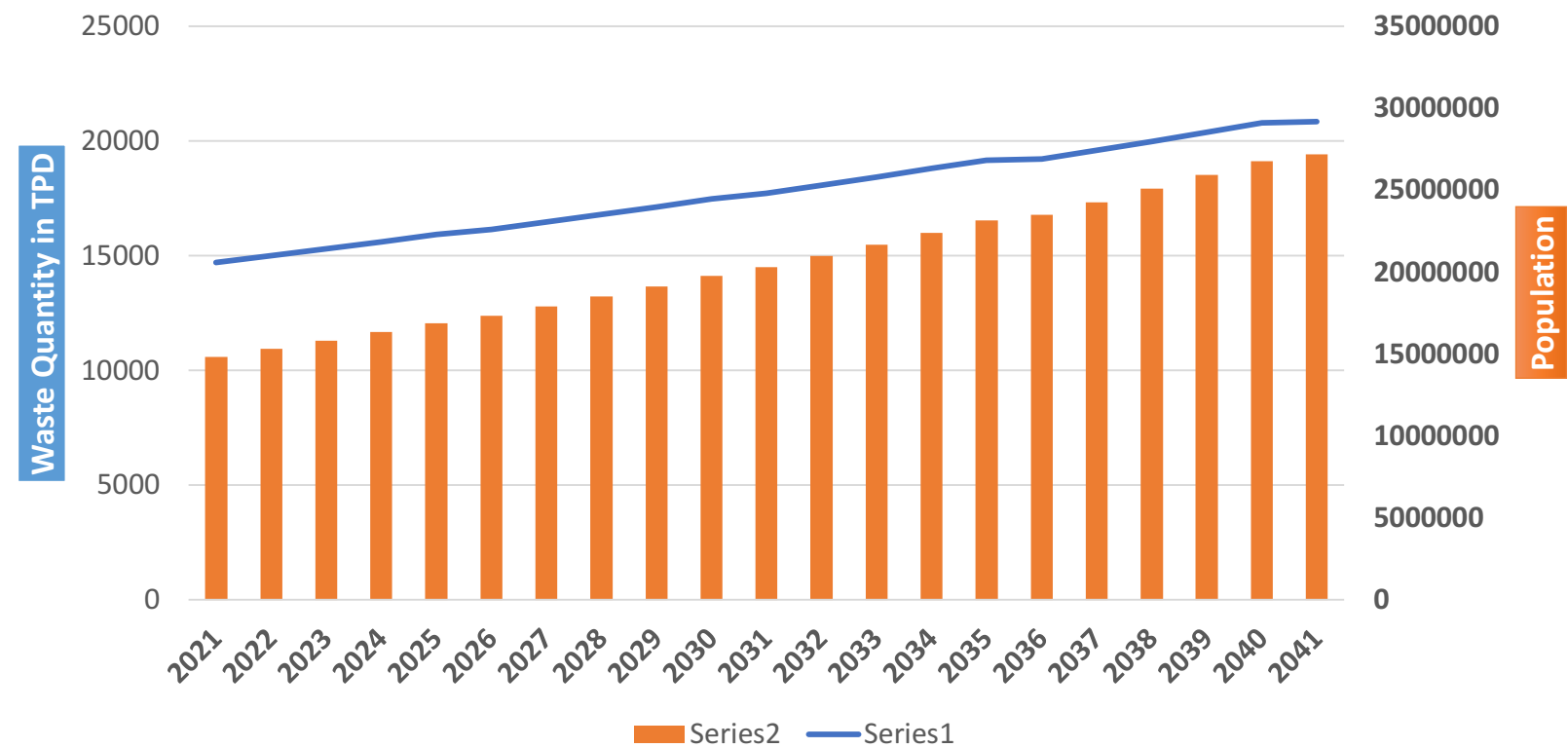
As per projection, the waste generation will increase from **11000 TPD in 2023 to 20,000 TPD by 2041** (as per MPD 2041).

To meet the increasing waste generation demand, MCD has **proposed to setup of 2 no. of proposed WTE plants** of 5000 TPD capacity and **expansion of existing two WTE plants** by 1000 TPD each at Okhla & Tekhand.

Setup of **Bio-CNG of 300 TPD capacity** and **CBG plant of 100 TPD capacity** for separate processing of **wet waste** which will likely to be commissioned by 2024

This will increase the **waste processing capacity by 15573 TPD capacity (more than 100%)** by the year 2027 which is sufficient for next 10 years.

Setup of new waste processing facility is subjected to the **land availability by DDA**



Order Para No. 3.8.6

Direction

All ULBs shall reassess quantum of C&D waste being generated in their respective areas and submit an action plan according within a months' time to the Convenor of the SWMC for Solid Waste Monitoring.

Delhi produces approx. 6000 TPD of C&D waste material. MCD has setup four nos. of C&D plants to cater C&D waste generated from 12 zones of MCD

S. No.	C&D Plant	Capacity (TPD)
1	Bakkwarwala	1000
2	Burari	2000
3	Ranikhera	1000
4	Shastri Park	1000
Total (TPD)		5000



C&D Plant, Bakkwarwala



C&D Plant, Burari

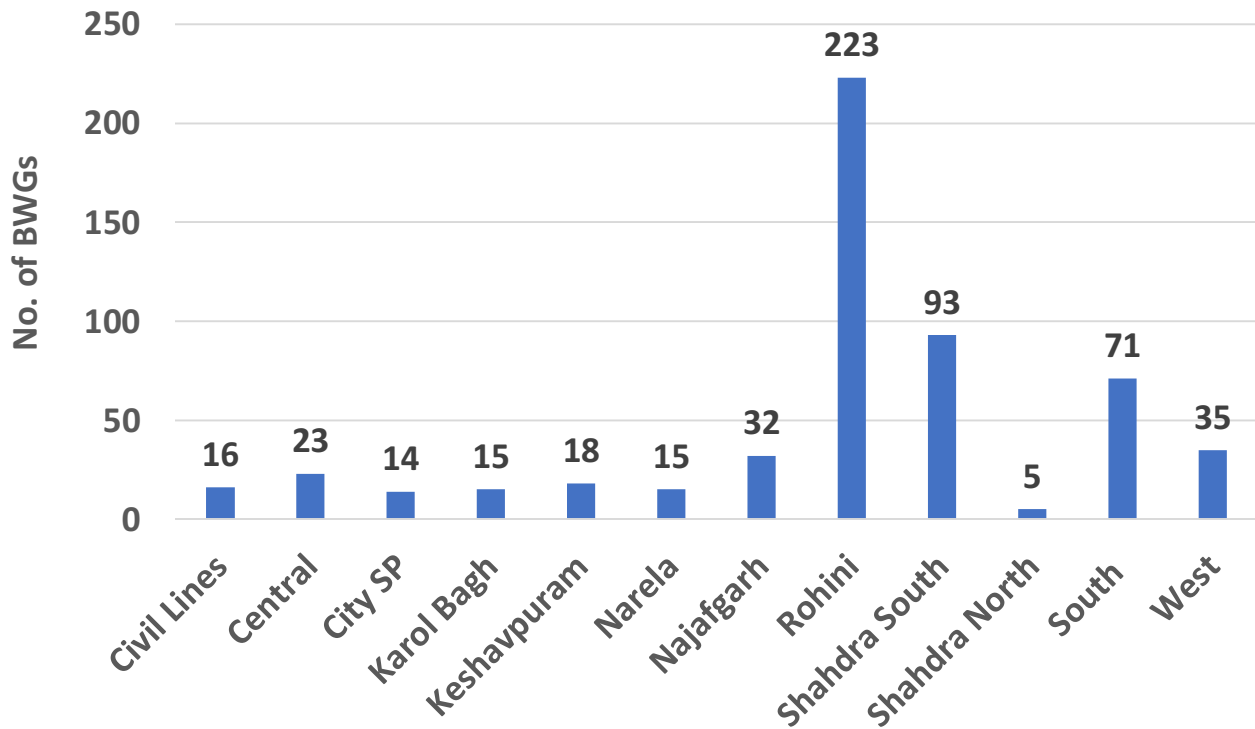
Recycled material and products:

- Recycled coarsed aggregate
- Stone dust
- Interlocking pavers blocks
- Chequered tiles
- Kerb stones, concrete bricks & blocks

1. **148 C&D waste dumping sites** for the general public
2. Out of these 148 sites, approx. **55 no. of sites** have been provided with GI barricading sheets, LED sign boards and sprinklers etc. in order to combat dust pollution
3. Made **compulsory use** of recycled C&D products in all the construction/ civil works as per C&D Waste Management rules
4. **Pilot project** was initiated in **10 wards of West Zone**, MCD from May 14th - August 13th, 2023 to reduce air pollution from C&D waste. Same will be replicated in other zones also

Order Para No. 3.5.2

Direction	Timeline
The data of BWGs in all of 12 zones of MCD along with status of DWPFs in such BWGs shall be provided by MCD by 30th April, 2023 to the Convenor of the SWMC for Solid Waste Monitoring.	30th April, 2023
A revised inventory along with details of BWGs in every Ward / circle/ Zone in respective jurisdictions of the ULBs along with officers responsible for a comprehensive inventory, assessment of quantum of waste generated by these generators and status of DWPFs in their premises shall be submitted to the Convenor of the SWMC for Solid Waste Monitoring by 30th June, 2023.	30th June, 2023



Efforts are being made to ensure that remaining BWGs will also have on-site waste processing.

S.No	Type of BWG	No. of BWGs	No. of BWG with on-site waste management/ self utilized
1	Hospitals/ Nursing Homes/ labs	62	44
2	Hotels/ Restaurants/ dhabas	91	82
3	Education	36	21
4	Malls/Cinema Buildings	21	18
5	RWAs/ Gated Societies	239	86
6	Banquet Hall	61	58
7	Guest House/ Motels	16	15
8	Commercial Establishment	4	4
9	Club	13	13
10	Farm Houses	8	8
Total		551	349

MCD has declared **353 colonies** as Zero Waste Colonies which are doing 100% waste segregation at source and in-house composting. Only dry waste is channelized through authorized waste collection agencies

S. No.	Zone	Numbers
1	Narela	4
2	City SP	25
3	Keshavpuram	12
4	Civil Lines	5
5	Karol Bagh	17
6	Rohini	43
7	South	60
8	Central	16
9	West	28
10	Najafgarh	40
11	Shah South	100
12	Shah North	3
Total		353

Domestic Hazardous Waste & Sanitary Waste Management

Order Para No. 3.7.1

Direction	Timeline
Timelines for 100% Collection, Transportation & Disposal of Domestic Hazardous Waste at the Treatment, Storage and Disposal Facility (TSDF) for Hazardous Waste at Bawana is 31st July, 2023	31st July, 2023
MCD, NDMC and DCB shall ensure that 100% collection, transportation and disposal of domestic hazardous waste and sanitary waste shall be done as per the provisions of the SWM Rules, 2016 and necessary arrangements be made in this regard for disposal of sanitary and biomedical waste at CBWTF and other domestic hazardous waste at the TSDF for Hazardous Waste at Bawana by 31st July, 2023	31st July, 2023

Status:-

Domestic Hazardous Waste and Sanitary Waste is collected in separate black box attached to auto tippers and sent to WTE Plants as per the SWM Rules, 2016

1. Joint survey has been carried out - MCD and Railway officers in compliance of direction of NHRC.
2. The quantity of MSW lying on 105 km of Railways track in Delhi was assessed as **31989 MT** in June, 2023.
3. A special drive is being undertaken to remove complete legacy waste from Azadpur to Narela in coordination with Railway Department under the supervision of NHRC.
4. So far, around **9106 MT of MSW** has been lifted till 30.11.2023.
5. Remaining **22883 MT** will be lifted upto 31.03.2024.



MSW lifted along the tracks in Keshavpuram Zone



MSW lifted along the tracks in Central zone

Order Para No. 3.7.2

Direction

“ULBs shall ensure 100 % Collection, Transportation & Disposal of Street Sweepings and Silt Removed / Collected from the Surface Drains strictly as per the provisions of the SWM Rules, 2016 and make necessary arrangements in this regard, especially disposal. Ward/Circle/Zone wise timelines shall be submitted by local bodies by 30th April, 2023 to the Convenor of the SWMC for Solid Waste Monitoring

1. MCD has a total length of 15582 km colony roads (in terms 12 ft width) which is **swept by approx. 57500 nos. of sanitation workers** deputed in various wards under jurisdiction of MCD.
2. In market/ commercial areas it is done **twice daily**.
3. MCD has **52 nos. of Mechanical Sweepers** using treated STP water and equipped with GPS system .
4. Approx. **1700 km of road length** is swept with an average of 30-35 km per day on PWD roads.
5. **Approx. 150 MT per day dust collected** by all 52 MRSMs is being dumped in designated sites.
6. **18 nos. of new MRSMs** are under procurement.
7. Sweeping waste is deposited at **separate RC bins** at Dhalaos & FCTS for its final disposal
8. **Pilot project in Janak Puri South Model Ward** wherein sweeping starts before 6 am and deployed adequate no. of vehicles to SKs with route optimization & close monitoring at SS level.

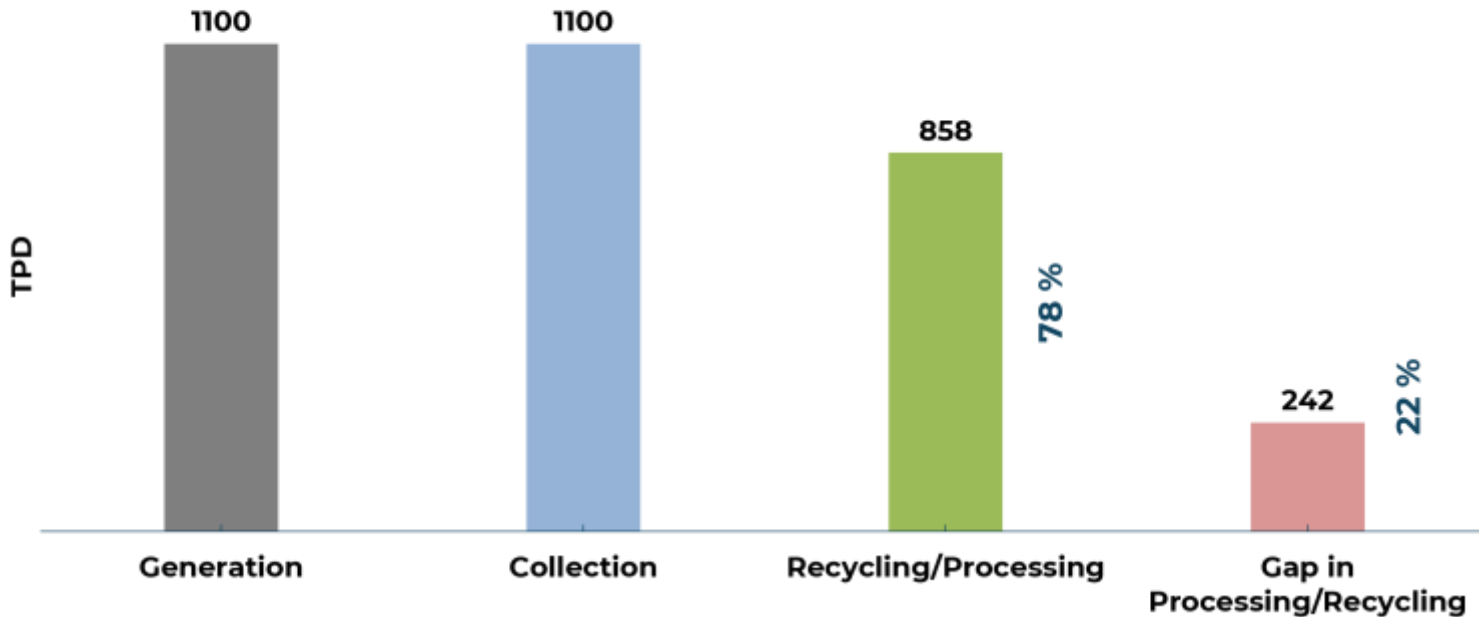


SILT REMOVED FROM DRAINS:

1. **Above 4ft** from 01.10.2022 till 31 July 2023 is **93416 MT**
2. **Below 4ft** from 01.10.2022 till 31 July 2023 is **90083 MT**

Order Para No. 3.7.3

Plastic Waste Generation is 10% of MSW Generation



Initiatives

1. CLTF Constitution
2. Plastic Waste Monitoring Dashboard
3. Enforcement Campaigns
4. Notification of PWM Bye-Laws 2023
5. 100DaysToBeatPlastic Campaign
6. Intensive Public Awareness drives through various media
7. Engagement of RWAs, NGOs, WMAs for usage of SUP alternatives
8. Setup of Waste Processing Facilities – WtE and MRF
9. Plastic Roads
10. RRR Centres
11. Vikalp Stores
12. PET Bottle Crusher machines

Glimpse of Initiatives



RRR Centre at Kehavpuram Zone



Project Vikalp



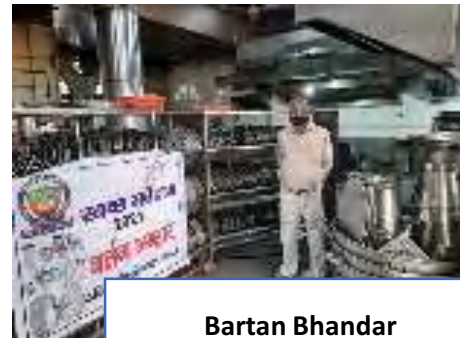
MCD designed with used plastic bottles



Built urinal reusing 1500 plastic bottles in Shadipur Depot



Cycle rally at Charti Lal Goel, Heritage Park near Lal Quila



Bartan Bhandar



Recycled plastic made benches



Recycled plastic made dustbins



Used plastic banks



PET bottle Crusher Machine at Alkahnanda market



Gurupurab – Zero Waste Event

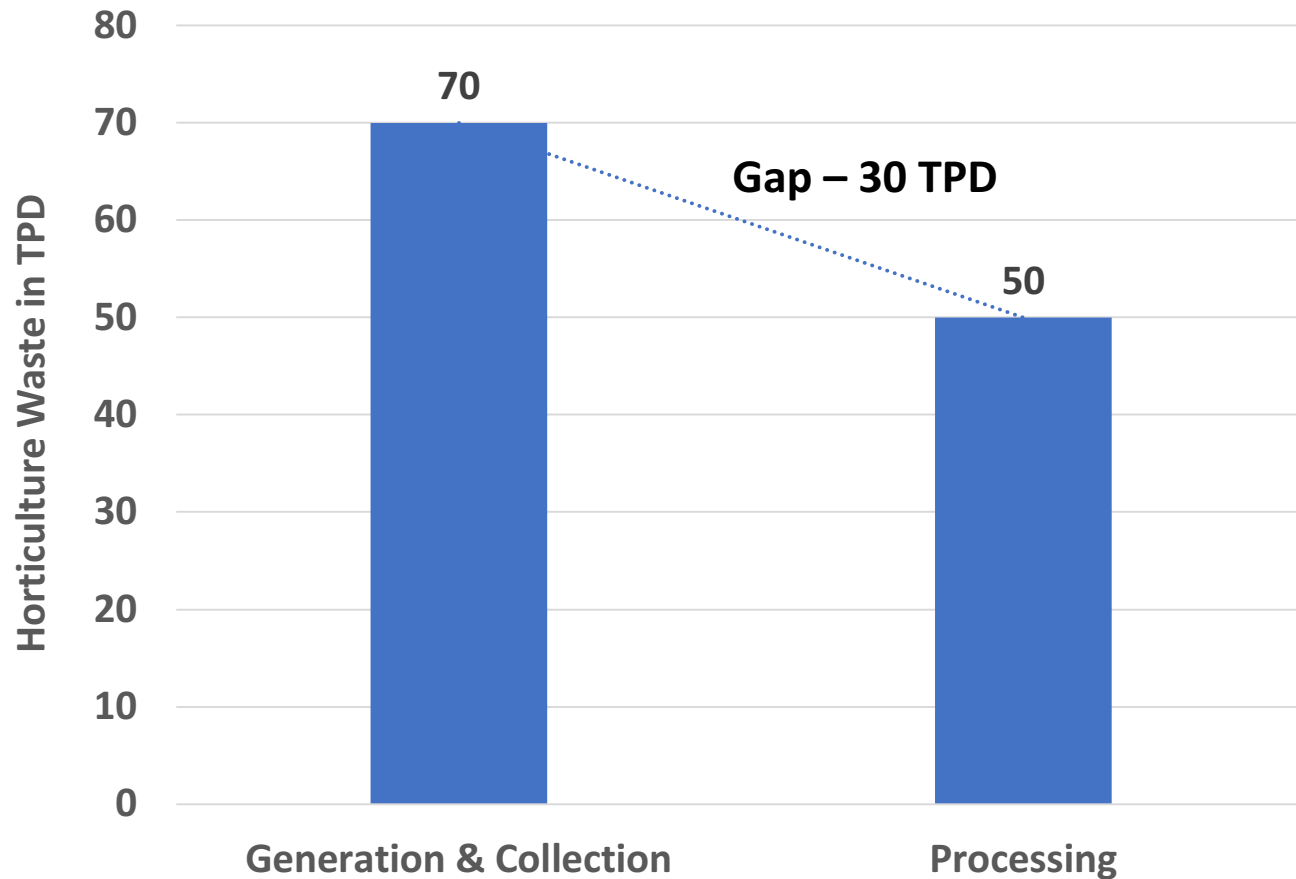


Eco Bag Centres in Mandis

Order Para No. 3.7.5

Direction

MCD shall reassess and submit actual figures on the zone wise quantum of horticulture waste generated and their action plan zone wise for 100% collection, transportation, processing of horticultural waste in their area of jurisdiction as per the provisions of the SWM Rules, 2016 by 30th April, 2023 to the Convenor of the SWMC for Solid Waste Monitoring.



Green Waste Management Centres – 43 nos.

Timeline for 100 % Processing of Horticultural Waste – December 2024

Order Para No. 3.7.4

Direction	Status
MCD lacks comprehensive data on dairy farms and gaushalas and thus should carry out complete inventory of the dairy farms and gaushalas located in their jurisdiction in the modified inventory proforma of GOI's guidelines within 30th June, 2023 and submit an action plan, including zone wise details of quantum of dairy waste generation, collection, transportation & processing / disposal in Delhi, and timelines for 100% collection, transportation & processing of dairy waste in Delhi along with the responsible officers to the Convenor of the SWMC for Solid Waste Monitoring by 31st July 2023.	Inventory Completed

- MCD has 8 no. of dairy colonies.
- MCD has done assessment of all dairy farms and gaushalas located in their Jurisdiction for which 3 biogas plants at Ghoga, Nangli and Goyla are under construction.

S. No.	Location	Capacity in TPD	Timeline
1	Goyla dairy	215	Mar-24
2	Ghoga Dairy	290	Mar-24
3	Nangli Dairy	215	Test Commissioning in October 2023
TOTAL		720	



Order Para No. 3.8.7

Direction	Timeline
Committee under the chairmanship of Commissioner of Industries, GNCTD and consisting of MD, DSIIDC, Commissioner, MCD, Divisional Commissioner, Revenue Department and Secretary, Urban Development as member convener to look into the various issues related to general SWM in industrial areas and the agency responsible for proper management of solid waste in the industrial areas. The committee shall submit its report along with recommendations to the convener of SWMC for Solid Waste Monitoring by 30th April, 2023.	30th April, 2023

Carried out **Joint inspection** with DSIIDC, DDA and MCD to **identify the vacant plot for establishing the MRF in industrial areas.**

So far, **9 sites** have been identified suitable during Joint Inspection survey.

DDA has been requested to **allot proposed lands** to construct MRF in the industrial areas

Sl. No.	Zone	Name of Industrial area	Location of the Vacant Land & its area
01	Keshav Puram	Wazirpur	Plot No. 29(i) near Azadpur flyover with an approximate area of 4725 sqm. Suitable for MRF due to its area, approach road, surroundings
02.	Keshav Puram	Lawrence Road	No land available
03.	Civil Lines	Rajasthan Udyog Nagar	Two nos. of vacant land identified having an area of approx. 2600 sqm at Plot No. 34 Rajasthani Cooperative, GT Karnal Rd, Jahangirpuri Industrial Area
04.	Rohini	Mangolpuri Phase-I & II	1. Approx. 1 hectare area near STP A-Block Mangolpuri Phase-I 2. Approx. 0.7-hectare area at A-Block Mangolpuri Phase-I 3. Approx. 2.74-hectare area at A-Block Mangolpuri Phase-I 4. Approx. 2.39-hectare area at B-Block Mangolpuri Phase-I
05.	Central	Okhla Phase-III	No land available
		Flatted Factories Okhla	No land available
		F.I.E Complex	No land available
06.	Narela	Nangloi	No land available
07	Shah South	Patparganj	No land available
08.	Shah North	Jhilmil	No land available
09.	West	Mayapuri Phase-I & II	No land available
10.	Karol Bagh	Kirti Nagar, DLF, Moti Nagar, Naraina, Nagafgarh Road	DDA land available near Samta Dham Yog Ashram Naraina Industrial area, Phase-I with an approx. area of 2300 sqm
		Kriti Nagar, Industrial Area	DDA land is available with approx. area of 1050 sqm near Panchayati Udasin Akhara and Metro Corridor

Illegal Dumping of MSW/Garbage

S.No.	Zone	No of GVPs identified & removed
1	Central	21
2	South	27
3	West	34
4	Najafgarh	30
5	Rohini	7
6	Civil Lines	13
7	Keshavpuram	4
8	Karol Bagh	18
9	City-SP	16
10	Narela	16
11	Shahadra South	32
12	Shahadra North	12
TOTAL		230



1. Identified **230 no. of GVPs** which have been removed during Swachh Survekshan 2023.
2. The **regular watch** is being done at the hotspots of illegal dumping of MSW / Garbage / Malba to **check their reoccurrence**
3. Conducted **Swachhata hi Seva Drive** from 15th Sept - 2nd Oct 2023. Approx. 500 no. of locations covered in all 250 wards
4. Designated **C&D waste dumping sites** for disposal of malba by general public for reducing illegal dumping of C&D waste.

Order Para No. 3.8.2

Direction	Status
Assessment and characterisation of wastes should be conducted by all ULBs by 31st July, 2023	Proposal is to undertake assessment & characterization of MSW in MCD Jurisdiction which is under planning stage.
Portal / website to be put in place showing daily generation, collection, recycling, processing, and disposal at SLF/Dumpsite of MSW by 30th June, 2023, and link of the same shall be made available to public consumption and encourage community participation. The online feed shall also be made available to Urban Development Department of GNCTD, DPCC and CPCB.	Dashboard shall be placed in public domain for transparency and community engagement by 31st January, 2024.

Order Para No. 3.8.3

Direction	Status
Daily quantum of MSW supplied to the concessionaire / operator of processing facilities (WtEs, compost plants, etc.) shall be properly weighed through computerised weighing machines which should be connected to the online system of the concerned departments and local authorities mandatorily, including Urban Development Department and DPCC.	All dumpsites and centralized waste processing facilities are equipped with RFID system for real time monitoring data of all vehicles.

Order Para No. 3.8.4

Direction	Status
MCD, NDMC and DCB shall carry out Third Party Audit of Solid Waste Management, including segregation (waste types as per SWM Rules, 2016), collection, transportation, recycling, processing and disposal at SLF/dumpsite and compliances with the SWM Rules, 2016 through an independent and reputed expert agency in field of environment / solid waste management. MCD, NDMC and DCB shall award the work within a fortnight and shall complete the audit by 30th September, 2023.	Engaged ASCI for performance audit of waste management. The work is in progress and likely to be completed by 31.12.2023.

Order Para No. 3.8.10

Direction	Status
MCD, NDMC, DCB and Environment Department of GNCTD shall initiate an IEC campaign IEC plan in this regard including an annual calendar of IEC activities shall be submitted by all agencies to the Convenor of this SWMC within a fortnight	Each zonal level Concessionaire submit monthly IEC action plan to Zonal DEMS staff for its execution and compliance to enhance waste segregation at source and to comply with SWM Rules 2016.

Order Para No. 3.6.1

Direction	Timeline
MCD shall engage additional 10 trommels (5,200 TPD capacity) by 30th June, 2023.	30th June, 2023
MCD should assess realistically the number of trommels required to be engaged and indicate dumpsite wise numbers of trommels required to complete bio mining, the numbers of which shall be submitted by 15th April, 2023 to the Convenor of the SWMC for Solid Waste Monitoring.	15th April, 2023
Hon'ble NGT vide order dated 16.02.2023 directed that the timeline of May 2024 be further shortened, and accordingly it was decided that MCD should complete a fresh scrutiny of the timelines and assessment of available legacy waste in dumpsites including fresh waste dumped as on 28.02.2023 duly reflecting the concerns of Hon'ble NGT in the said order as well as corresponding resources required, and submit a report on the same by 15th April, 2023 to the Convenor of the SWMC for Solid Waste Monitoring.	15th April, 2023

S. No.	Particulars	Okhla	Bhalswa	Ghazipur
1	Location	Maa Anand Mai Road near CONCOR	G.T. Karnal Road opposite Sanjay Gandhi Transport Nagar	Ghazipur Dairy Farm at Delhi-Meerut Highway
2	Coordinates	28°30'42.10"N 77°17'1.90"E	28°44'27.10"N 77°09'26.40" E	28°62'48.8" 77°32'7.95" E
3	Landfill Established	1996	1994	1984
4	Age in years	27	29	39
5	Area of landfill site	62 Acre	70 Acre	70 Acre
6	Heigh in Meters (before biomining operations)	55 – 60 m (above ground level)	65 m (above ground level)	65 m (above ground level)
7	Legacy Waste in Lakh MT (before drone survey in 2022)	60	80	140

Bhalswa



Drone Images - Dumpsites

Okhla



Ghazipur



Hon’ble NGT vide order dated 17.7.2019 and 19.11.2019 in OA No. 519/2019 and 386/2019 directed the MCD to start bio-mining/remediation of legacy waste at SLF (dumpsites) Okhla, Bhalswa and Ghazipur on the model of Indore Municipal Corporation w.e.f 08.10.2019

Existing dump site at Okhla, Bhalswa and Ghazipur has already outlived its life

S. No.	SLF Sites	Legacy Waste Present at Site July, 2019 (Lac MT)	Legacy Waste Processed till 30.11.2023	Total Waste (Legacy + Fresh) based on Volumetric Assessment through Drone in June, 2022* (Lac MT)	Quantity of fresh MSW dumped from July 2022 to 30.11.2023 (Lac MT)	Total Quantity of Legacy Waste Bio-mined from July 2022 to 30.11.2023 (Lac MT)	Balance Quantity of Waste at Dumpsite (Lac MT)	No. of Trommels	Timeline for 100% Remediation
1	Bhalswa	80	50.98	73	12.65	26.11	59.54	22	2024
2	Ghazipur	140	21.56	85	9.13	10.30	83.83	25	
3	Okhla	60	35.90	45	8.13	17.59	35.54	11	
Total		280	108.44	203	29.91	54.00	178.91	58	

* Drone survey had taken the quantity above the ground level



Stacks of different fractions of materials



Less than 6 mm size inert/soil



6-30 mm size inert



C&D fraction after screening



RDF after screening

Screened Waste	Fractions Recovered after Screening (in %)
Inert Waste	70 - 75
Refuse Derived Fuel (RDF)	5-10
C&D Waste	15-20

Status of Biomining of Legacy Waste as on 30.11.2023

Status of Bio Mining - Remediation of Legacy Waste at Dumpsites as on 30.11.2023

S.N	Activity		Bhalswa	Okhla	Ghazipur
1	Status on Agreement		Executed on 16.11.2022	Executed on 07.11.2022	Executed on 24.11.2022
2	No of Trommel Machines Deployed		16 nos Trommel - Installed Scalper (Keestrack) - 2nos	09- Kleemann installed, 02- Powerscreen Installed 05 -B/S Installed C&D Plant installed Processing to start after necessary approval.	20 nos Trommel - Installed 1 nos Kleeman - installed 1 nos Terex - installed
	Indicating Installed Capacity/Machine		Each trommel/keestrack having 375/250 MT per shift of 10 hrs processing capacity	1000 TPD per machine-- Kleeman 500 TPD per machine--Powerscreen, B/S	400 TPD
	Total Capacity/Day as on today		10500 TPD	11500 TPD	8800 TPD
3	Transportation arrangements - no. of trucks reg. CNG/Diesel		402	237	130
4	Target set		10000 MT	10000 MT	5000 MT
5	Bio-mining	Inert	7902.313	4776	0
	carried out on	C&D	4427.272	167	0
	29.11.2023	RDF	625.250	273	0
Total Biominig in MT			12954.835	5216	0
6	Cumulative	Inert	1828336.524	1461028	516263
	Bio Mining	C&D	496252.264	39435	85740
		RDF	94237.979	19630	2700
Total Biominig in MT			2418826.767	1520093	604703

INERT

- Being used as land filling material in NHAI Projects
 - NHAI land near NTPC Eco Park
 - NHAI Meethapur 1, UER 2
- Eco Park, private land and Ravali, Reliance road (UP)
- Low lying areas such as Narela, Rohini Sec-23 & 18, SSBDK, Sighu Border, Swaroop Nagar

C&D

- Being used as land filling material in NHAI Projects
 - NHAI FRD Bypass project, RMC Plant
 - NHAI Meethapur 1, UER 2
- Eco Park, private land and Ravali, Reliance road (UP)
- Low lying areas such as Rohini sec – 18 & 23, Singhu Border, Alipur, Narela, Swaroopnagar

REFUSE DERIVED FUEL (RDF)

- Being utilized by Cement Factories such as Ultratech cement Chittorgarh and JK Cement Chittorgarh
- Nikita Paper Mill, Shamli
- Rollz India

1. The Erstwhile Municipal Delhi Corporations has submitted the funding proposals for legacy waste remediation under SBM (U) 2.0.
2. MoHUA has sanctioned legacy waste remediation proposals of 3 Dumpsites for Rs. 776.47 Crore on 27th March 2022 and later revised to Rs. 1154 Crore in August 2022
3. MCD has awarded **integrated biomining work for 30 Lakh MT** (extendable upto 45 Lakh MT) for each dumpsite @ Rs. 745 per MT under SBM 2.0
4. Developed **Real Time Monitoring Dashboard** for Remediation of Dumpsites
5. Presently, approx. **18000-22000 TPD** from all three dumpsites being **biomined on daily basis** which has never been achieved by any of the cities in India.
6. Further, MCD has invited bids for 30 lakh MT for Ghazipur dumpsite and 20 Lakh MT for Okhla dumpsite, to expedite the biomining process
7. Out of three dumpsites, now, **no fresh MSW is being dumped at Okhla dumpsite**. Further, there is plan to stop the fresh waste at Ghazipur and Bhalswa by year 2027

Height Reduction

Okhla Dumpsite



Bhalswa Dumpsite



Ghazipur Dumpsite



Initially, the height of all three dumpsites was 50-60 meters. Now, the **height has been reduced by approx. 10-15 meters** in various location at all three dumpsites



First Engineered Sanitary Landfill Facility (ESLF) developed in an area of 22.88 acres at Tehkhand for scientific disposal of rejects/ inert

Order Para No. 3.8.5

Direction	Status
MCD, DDA, and Forest Department shall take necessary advance action for proper utilization of the reclaimed land and submit detailed prospective Action Plan along with timelines and Nodal Officer for implementation of the Action Plan within a months’ time to the Convenor of the SWMC for Solid Waste Monitoring.	MCD has prepared Future Plan for SWM and utilization of reclaimed dumpsites in MCD and submitted to MoHUA and DDA for further necessary action

Hon'ble NGT OA no. 300/2022 and 288/2022 in the order dated 16.02.2023 has directed as under:-

- To develop dense forest in atleast on one third of the land occupied by the dumpsite, after the sites are cleared.
- One third can be utilized for setting up of integrated waste processing facilities or other like infrastructure.
- The remaining one third can be utilized for any other purpose consistent with the above purposes, including a part of it being utilized for monetizing, if funding is required for tackling legacy waste.
- Based on above directions and considering the future requirement of MCD to process the municipal solid waste, an action plan has been prepared to setup various type of waste processing facilities on the reclaimed land of dumpsites.



Future Mapping – OKHLA

Okhla Dumpsite

Facility	Capacity	Area (in Acres)
ESLF	17 Lakh Cum	44
C&D Waste Processing Plant	1000 TPD	8
Dense Forest around the boundary wall*		10
Total		62

*This land would be utilized for compensatory plantation / afforestation



Bhalswa
Dumpsite

Facility	Capacity	Area (in Acres)
ESLF	20 Lakh Cum	52
Biomethanation/ WtE	500 TPD/2000 TPD	10
Dense Forest around the boundary wall*		8
TOTAL		70

*This land would be utilized for compensatory plantation / afforestation



Ghazipur Dumpsite

Facility	Capacity	Area (in Acres)
ESLF	10 Lakh Cum	27
WTE Plant	2000 TPD	15
Biomethanation/ Bio-CNG	500 TPD	10
C&D Waste Processing Plant	1000 TPD	8
Dense Forest around the boundary wall*		10
Total		70

*This land would be utilized for compensatory plantation / afforestation

Treatment of Leachate generated from 3 Dumpsites

Order Para No. 3.6.3

Direction	Timeline	Status
MCD should ensure treatment of leachate as per prescribed standards by providing sufficient capacity of leachate treatment facility. Details regarding quantity of leachate discharged and Leachate Treatment Plants (LTP) (in KLD) sufficient to treat the entire leachate generated at the dumpsites, along with the completion timelines and responsible officers be submitted by MCD by 30th April, 2023 to the Convenor of the SWMC for Solid Waste Monitoring.	30th April, 2023	Cases for AA&E/S for Leachate Treatment Plants of 100 KLD capacity at Bhalswa and Ghazipur are under process as fresh waste is being dumped at these 2 sites only

S. No.	Particulars	Okhla	Bhalswa	Ghazipur
1	No. of Perforate Pipes for Methane / CO Measurement	-	11	12
2	No. of Cameras	30	31	10
3	Manpower deployed	6	10	6
4	Water Sprinkler	6	2	1
5	Anti Smog Gun	9	2	1
6	Fire Extinguisher	35	10	25

1. MCD has issued SOP for preventive measures to be taken at all the 3 Dumpsites for no fire incidents.
2. All three dumpsites have nearby fire stations.
3. Due to the above measures during the current year, only 1 no. of major fire at Ghazipur Dumpsite occurred as compared to the 5 no. of fire incidents reported in year 2022

Order Para No. 3.8.9

Direction	Timeline	Status
Committee under Chairmanship of Divisional Commissioner, Revenue Department of GNCTD, consisting of Pr. Secretary, Environment and Forest; VC, DDA; Commissioner MCD with Secretary, Urban Development as member convener to resolve all land related matters (like identification and handing over land to ULBs for setting up of material recovery and processing facilities, etc.). This Committee shall ensure identification and handing over the requisite land parcels to ULBs, as the case may be, by 30th April, 2023.	30th April, 2023	1. Expeditious allotment of 4 Acre of land at Ghazipur Pocket “C” Integrated Freight Complex for biomethanation plant and consider the allotment of 6 acres parcel of land for MCD 2. Request for allocation of 49 Acre land in “O” Zone for compensatory afforestation to enable MCD to obtain tree cutting permission for setting up of E-SLF at Sultanpur Dabas.

Order Para No. 3.8.13

Direction	Status
Action Points of the order dated 06.04.2023 and Action Plan of Solid Waste Management have been uploaded on the E-Samiksha Portal of Delhi under the head “Solid Waste Management in Delhi”. Nodal officers to update the progress w.r.t action points on monthly basis by 15th Day of the month.	MCD submits monthly ATR on E-Samiksha Portal in prescribed format by 15th of every month including Action Taken Report on points mentioned in Order dated 06.04.2023 of Chief Secretary and Minutes of 1st Meeting of SWMC held on 25.04.2023

Let's Segregate – Let's Recycle

Make City Swachh and Green

