Appendices

PART II – Performance Audit

Appendix-1.1
(Reference to Paragraph 1.8.1, Page 31)

Statement showing the 30 Circles in the six Zones of Greater Hyderabad Municipal Corporation

Sl. No.	Circle No.	Name of the Circle	Name of the Zone
1.	Circle – 1	Kapra	LB Nagar
2.	Circle – 2	Uppal	LB Nagar
3.	Circle – 3	Hayathnagar	LB Nagar
4.	Circle – 4	LB Nagar Zone	LB Nagar
5.	Circle – 5	Saroornagar	LB Nagar
6.	Circle – 6	Malakpet	Charminar
7.	Circle – 7	Santoshnagar	Charminar
8.	Circle – 8	Chandrayangutta	Charminar
9.	Circle – 9	Charminar	Charminar
10.	Circle – 10	Falaknuma	Charminar
11.	Circle – 11	Rajendra Nagar	Charminar
12.	Circle – 12	Mehdipatnam	Khairatabad
13.	Circle – 13	Karwan	Khairatabad
14.	Circle – 14	Goshamahal	Khairatabad
15.	Circle – 15	Musheerabad	Secunderabad
16.	Circle – 16	Amberpet	Secunderabad
17.	Circle – 17	Khairtabad	Khairatabad
18.	Circle – 18	Jubilee Hills	Khairatabad
19.	Circle – 19	Yousufguda	Serlingampally
20.	Circle – 20	Serlingampally	Serlingampally
21.	Circle - 21	Chandanagar	Serlingampally
22.	Circle – 22	RC Puram, Patancheru	Serlingampally
23.	Circle – 23	Moosapet	Kukatpally
24.	Circle – 24	Kukatpally	Kukatpally
25.	Circle – 25	Qutbullapur	Kukatpally
26.	Circle – 26	Gajularamaram	Kukatpally
27.	Circle – 27	Alwal	Kukatpally
28.	Circle – 28	Malkajgiri	Secunderabad
29.	Circle - 29	Secunderabad	Secunderabad
30.	Circle – 30	Begumpet	Secunderabad

Source: Information provided by GHMC

Appendix-2.1
(Reference to Paragraph 2.2, Page 37)
Details of actual MSW assessed, generated, segregated, processed and disposed during audit period (2017-18 to 2021-22) in the test-checked other 14 ULBs

(MSW figures in MT)

Sl. No	Name of the ULB	MSW generated	MSW collected	MSW Un-collected	MSW segregated/ processed	Unprocessed MSW disposed in dumpsite	Percentage of unprocessed MSW disposed to the collected MSW	JPV observations on waste processing facilities in Dumpsites of the respective ULBs
	1	2	3	4=(2-3)	5	6=(3-5)	7=(6/3)*100	8
1.	Bollaram	17,520	17,520	0	8,031	9,489	***54***	DRCC exists but not in operation due to fire accident. No composting facility.
2.	Chandur	8,834	8,631	203	8,184	447	*5*	DRCC and composting facility does not exist.
3.	Haliya	7,210	7,170	40	6,720	450	*6*	No composting facility and DRCC under construction.
4.	Kalwakurthy	20,100	20,000	100	12,200	7,800	***39***	DRCC exists. No composting facility.
5.	Khammam	2,51,700	2,23,842	27,858	23,871	1,99,971	***89***	DRCC exists. Composting facility not put to use.
6.	Khanapur	14,350	14,350	0	11,300	3,050	***21***	DRCC exists. Composting facility under construction.
7.	Kothagudem	48,960	48,960	0	39,600	9,360	*19*	DRCC and composting facility exists.
8.	Mahabubnagar	1,59,120	1,55,520	3,600	39,600	1,15,920	***75***	DRCC and composting facility exists.
9.	Mancherial	70,445	70,445	0	60,210	10,235	*15*	DRCC and composting facility exists.
10.	Nagaram	24,929	24,929	0	14,895	10,034	***40***	DRCC exists. No composting facility
11.	Peerzadiguda	58,400	58,400	0	28,725	29,675	***51***	DRCC exists. No composting facility for MSW.
12.	Wardhannapet	32,688	20,750	11,938	20,750	0	*0*	DRCC and composting facility does not exist.
13.	Yellareddy	4,549	4,549	0	3,623	926	***20***	DRCC not put to use. No composting facility.
14.	Zaheerabad	79,920	79,920	0	95	79,825	***99***	DRCC and composting facility exists.
Total		**7,98,725**	**7,54,986**	**43,739**	**2,77,804**	**4,77,182**	***63***	

Source: Information furnished by the test-checked other 14 ULBs

Appendix-2.2
(Reference to Paragraph 2.6.1, Page 41)

Statement showing population projections and MSW assessed figures for the years 2011 to 2041 in the DPR prepared by GHMC

Year	Population projection as per Table-1.9 of DPR	MSW assessment (tonnes/day) as per Table-1.9 of DPR
2011	83,89,068	4,400
2016	90,14,472	5,085
2021	1,03,05,480	6,263
2026	1,10,15,852	7,320
2031	1,20,11,547	8,598
2036	1,32,98,779	10,255
2041	1,43,96,379	11,960

Source: DPR on IMSWM system furnished by GHMC

Appendix-2.3
(Reference to Paragraph 2.6.2, Page 42)
Assessment and Generation of Solid Waste in 14 test-checked other ULBs during 2017-22

Name of the ULB: Bollaram			
Year	**Population projected**	**MSW Assessed (MT/year)**	**Actual MSW Generated (MT/year)**
2017-18	**ULB constituted in 2019**		
2018-19			
2019-20	41,833	4,581	3,650
2020-21	46,016	5,879	5,840
2021-22	56,000	8,176	8,030
Name of the ULB: Chandur			
Year	**Population projected**	**MSW Assessed (MT/year)**	**Actual MSW Generated (MT/year)**
2017-18	**ULB constituted in 2018**		
2018-19	14,125	2,373	2,300
2019-20	14,500	2,446	2,373
2020-21	14,888	2,482	2,409
2021-22	15,559	2,628	2,482
Name of the ULB: Haliya			
Year	**Population projected**	**MSW Assessed (MT/year)**	**Actual MSW Generated (MT/year)**
2017-18	**ULB constituted in 2018**		
2018-19	13,358	1,825	1,752
2019-20	14,588	2,008	1,935
2020-21	16,553	2,190	2,081
2021-22	17,371	2,555	2,555
Name of the ULB: Kalwakurthy			
Year	**Population projected**	**MSW Assessed (MT/year)**	**Actual MSW Generated (MT/year)**
2017-18	28,110	2,581	2,581
2018-19	30,091	2,776	2,776
2019-20	30,091	4,257	4,257
2020-21	30,091	4,550	4,550
2021-22	30,091	4,782	4,782
Name of the ULB: Khammam			
Year	**Population projected**	**MSW Assessed (MT/year)**	**Actual MSW Generated (MT/year)**
2017-18	2,38,000	46,355	43,435
2018-19	2,69,000	51,830	48,910
2019-20	3,12,000	58,765	56,940
2020-21	3,65,000	64,970	61,685
2021-22	3,98,000	67,525	65,700

Name of the ULB: Khanapur			
Year	**Population projected**	**MSW Assessed (MT/year)**	**Actual MSW Generated (MT/year)**
2017-18	**ULB Constituted in 2018**		
2018-19	22,622	2,920	2,920
2019-20	22,848	3,285	3,285
2020-21	23,076	4,015	4,015
2021-22	24,757	4,380	4,380
Name of the ULB: Kothagudem			
Year	**Population projected**	**MSW Assessed (MT/year)**	**Actual MSW Generated (MT/year)**
2017-18	79,850	9,125	9,125
2018-19	79,850	9,125	9,125
2019-20	79,850	9,125	9,125
2020-21	79,850	9,125	9,125
2021-22	87,370	13,140	13,140
Name of the ULB: Mahabubnagar			
Year	**Population projected**	**MSW Assessed (MT/year)**	**Actual MSW Generated (MT/year)**
2017-18	2,17,143	28,080	28,080
2018-19	2,20,513	28,080	28,080
2019-20	2,23,481	29,520	29,520
2020-21	2,40,564	35,280	35,280
2021-22	2,54,514	38,160	38,160
Name of the ULB: Mancherial			
Year	**Population projected**	**MSW Assessed (MT/year)**	**Actual MSW Generated (MT/year)**
2017-18	87,153	13,505	12,775
2018-19	87,153	13,505	12,775
2019-20	87,153	13,505	12,775
2020-21	1,10,000	16,790	16,060
2021-22	1,10,000	16,790	16,060
Name of the ULB: Nagaram			
Year	**Population projected**	**MSW Assessed (MT/year)**	**Actual MSW Generated (MT/year)**
2017-18	**ULB Constituted in 2018**		
2018-19			
2019-20	53,400	6,935	6,935
2020-21	64,544	8,869	8,869
2021-22	82,446	9,125	9,125
Name of the ULB: Peerzadiguda			
Year	**Population projected**	**MSW Assessed (MT/year)**	**Actual MSW Generated (MT/year)**
2017-18	51,689	10,950	10,950
2018-19	51,689	12,775	12,775
2019-20	51,689	14,600	14,600
2020-21	51,689	16,060	16,060
2021-22	1,20,000	16,790	16,790

Name of the ULB: Wardhannapet			
Year	**Population projected**	**MSW Assessed (MT/year)**	**Actual MSW Generated (MT/year)**
2017-18	**ULB Constituted in 2018**		
2018-19	13,732	1,825	1,752
2019-20	13,732	2,008	1,935
2020-21	13,732	2,190	2,081
2021-22	13,732	2,555	2,519
Name of the ULB: Yellareddy			
Year	**Population projected**	**MSW Assessed (MT/year)**	**Actual MSW Generated (MT/year)**
2017-18	**ULB Constituted in 2018**		
2018-19	19,750	1,168	1,168
2019-20	19,750	1,387	1,387
2020-21	19,750	1,460	1,460
2021-22	21,725	1,570	1,570
Name of the ULB: Zaheerabad			
Year	**Population projected**	**MSW Assessed (MT/year)**	**Actual MSW Generated (MT/year)**
2017-18	52,193	4,285	4,285
2018-19	52,193	4,285	4,285
2019-20	89,355	7,351	7,351
2020-21	89,355	7,351	7,351
2021-22	89,355	7,351	7,351

Source: Information furnished by the test-checked other 14 ULBs

Appendix-2.4

(Reference to Paragraph 2.7, Page 44)
SLB performance indicators and benchmarks pertaining to SWM

Sl. No.	Performance indicator	Unit As percentage of	Benchmark (in *per cent*)
1	Household level coverage of SWM services	households and establishments covered by daily doorstep collection system	***100***
2	Efficiency of collection of municipal Solid Waste	total waste collected against waste generated within the project area	***100***
3	Extent of segregation of municipal Solid Waste	households and establishments that segregate their waste	***100***
4	Extent of municipal Solid Waste recovered	quantum of waste collected, which is either recycled or processed	***80***
5	Extent of scientific disposal of municipal Solid Waste	waste disposed in a sanitary landfill against total quantum of waste disposed in landfills and dumpsites	***100***
6	Extent of cost recovery in SWM services	recovery of all operating expenses related to MSWM services that the ULB is able to meet from the operating revenues of sources related exclusively to MSWM	***100***
7	Efficiency in redressal of customer complaints	total number of MSWM related complaints resolved against total number of MSWM complaints received within 24 hours	***80***
8	Efficiency in collection of SWM user charges	current year revenues collected against total operating revenues for the corresponding period	***90***

Source: "Handbook of Service Level Benchmarking", Ministry of Urban Development (2008), GoI

Appendix-2.5
(Reference to Paragraph 2.7.1, Page 45)

SLB achievements by test-checked other 12 ULBs against performance indicators pertaining to SWM for the year 2021-22

Sl. No	Particulars of SLB declaration in test-checked ULBs	Number of ULBs (range in percentage)								
		Zero	Name of the ULB	1 to 20	21 to 50	Name of the ULB	51 to 80	Name of the ULB	81 to 100	Name of the ULB
1	Household level coverage of SWM services	0		0	0		0		12	Bollaram Chandur Haliya Kalwakurthy Khammam Khanapur Mahabubnagar Mancherial Nagaram Peerzadiguda Yellareddy Zaheerabad
2	Efficiency of collection of municipal Solid Waste	0		0	0		0		12	Bollaram Chandur Haliya Kalwakurthy Khammam Khanapur Mahabubnagar Mancherial Nagaram Peerzadiguda Yellareddy Zaheerabad
3	Extent of segregation of municipal Solid Waste	0		0	6	Chandur Haliya Khammam Mancherial Peerzadiguda Yellareddy	5	Bollaram Kalwakurthy Khanapur Nagaram Zaheerabad	1	Mahabubnagar
4	Extent of municipal Solid Waste recovered	1	Kalwakurthy	0	1	Haliya	9	Bollaram Chandur Khammam Khanapur Mahabubnagar Mancherial Nagaram Peerzadiguda Yellareddy	1	Zaheerabad
5	Extent of scientific disposal of municipal Solid Waste	10	Bollaram Chandur Haliya Kalwakurthy Khammam Khanapur Mancherial Peerzadiguda Yellareddy Zaheerabad	0	0		0		2	Mahabubnagar Nagaram

Sl. No	Particulars of SLB declaration in test-checked ULBs	Number of ULBs (range in percentage)							
		Zero	Name of the ULB	1 to 20	21 to 50	Name of the ULB	51 to 80	Name of the ULB	81 to 100	Name of the ULB
6	Extent of cost recovery in SWM services	9	Chandur Haliya Kalwakurthy Khammam Khanapur Mancherial Peerzadiguda Yellareddy Zaheerabad	0	2	Bollaram Mahabubnagar	1	Nagaram	0	
7	Efficiency in redressal of customer complaints	1	Zaheerabad	0	0		7	Chandur Haliya Khammam Khanapur Mancherial Peerzadiguda Yellareddy	4	Bollaram Kalwakurthy Mahabubnagar Nagaram
8	Efficiency in collection of SWM user charges	5	Haliya Kalwakurthy Khanapur Yellareddy Zaheerabad	0	0		1	Mahabubnagar	6	Bollaram Chandur Khammam Mancherial Nagaram Peerzadiguda

Source: Information furnished by the test-checked other 12 ULBs

Appendix-2.6
(Reference to Paragraph 2.7.1, Page 46)

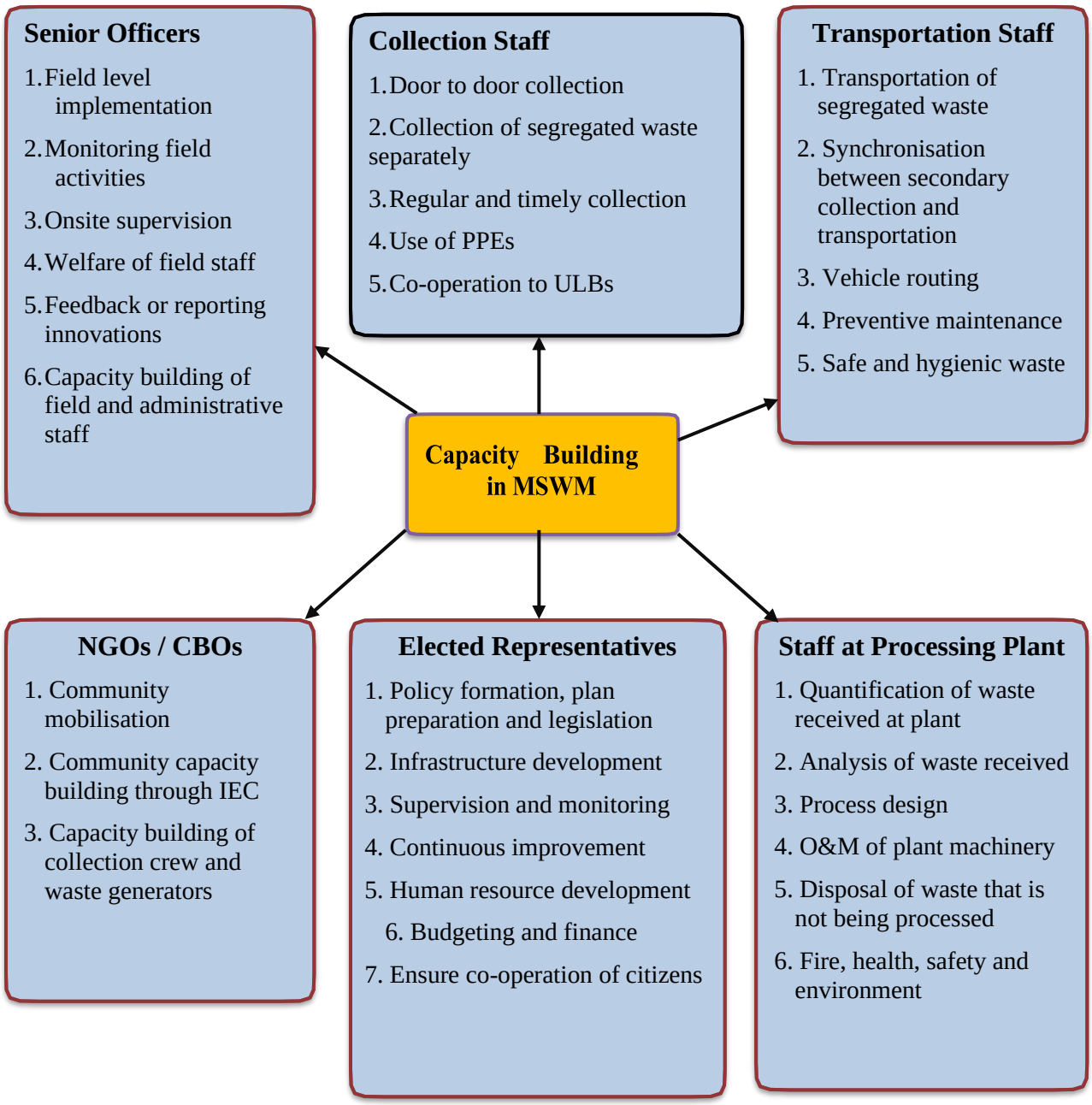
Statement showing MSW generated, collected, segregated/processed and disposed during 2021-22 in test-checked other 14 ULBs

(MSW figures in MT)

Sl. No	Name of the ULB	MSW generated	MSW collected	MSW uncollected	MSW segregated/ processed	Unprocessed MSW disposed in dumpsite	Percentage of unprocessed MSW disposed to the collected MSW
		1	2	3=(1-2)	4	5= (2-4)	6=[(5/2)*100]
1.	Bollaram	8,030	8,030	NIL	3,833	4,197	***52***
2.	Chandur	2,628	2,628	NIL	2,484	144	*5*
3.	Haliya	2,520	2,520	NIL	2,320	200	*8*
4.	Kalwakurthy	5,000	4,900	100	3,100	1,800	*37*
5.	Khammam	52,500	49,875	2,625	7,481	42,394	***85***
6.	Khanapur	4,320	4,320	NIL	3,560	760	*18*
7.	Kothagudem	12,960	12,960	NIL	10,800	2,160	*17*
8.	Mahabubnagar	38,160	37,440	720	15,120	22,320	***60***
9.	Mancherial	16,060	16,060	NIL	13,680	2,380	*15*
10.	Nagaram	9,125	9,125	NIL	7,300	1,825	*20*
11.	Peerzadiguda	13,870	13,870	NIL	12,483	1,387	*10*
12.	Wardhannapet	9,936	8,510	1,426	8,510	0	*0*
13.	Yellareddy	1,555	1,555	NIL	1,244	311	*20*
14.	Zaheerabad	19,800	19,800	NIL	38	19,762	*99*

Source: Information furnished by the test-checked other 14 ULBs

Appendix-2.7
(Reference to Paragraph 2.9, Page 50)
Capacity Building Approaches for Different Stakeholders



Source: MSWM, Manual 2016 (Part-II), Section 1.4.5.4

Appendix-3.1
(Reference to Paragraph 3.5, Page 59)

Tipping Fee dues from 9 ULBs and one Gram Panchayat for MSW transported to Jawaharnagar Treatment and Disposal facility in GHMC

Sl. No	Name of the ULB/Gram Panchayat	Dues as on 31.03.2022 (₹)
1.	Pocharam	51,81,245
2.	Peerzadiguda	3,55,10,321
3.	Nizampet	3,54,79,136
4.	Narsingi	2,39,20,965
5.	Manikonda	5,24,39,625
6.	Kompally	15,91,593
7.	Ameenpur	2,12,03,452
8.	Bandlaguda	26,00,109
9.	Boduppal	52,93,819
10.	Peeram Cheruvu **(Gram Panchayat)**	1,01,60,511
Total		**19,33,80,776**

Source: Information and documents on levy and collection of TF furnished by GHMC

Appendix-4.1

(Reference to Paragraph 4.1.1.1, Page 61)

Procurement of bins for source segregation of MSW by the test-checked other 14 ULBs during 2017-22

Name of the ULB	Number of bins procured			Expenditure incurred (₹)	Number of bins supplied to households		
	Dry waste	Wet waste	Domestic Hazardous waste		Dry waste	Wet waste	Domestic Hazardous waste
Bollaram	10,000	10,000	0	5,97,996	10,000	10,000	0
Chandur	4,400	4,400	0	4,43,812	4,400	4,400	0
Haliya	7,500	7,500	0	9,81,750	7,500	7,500	0
Kalwakurthy	7,500	7,500	0	8,97,974	7,500	7,500	0
Khammam	1,00,000	1,00,000	0	95,00,000	1,00,000	1,00,000	0
Khanapur	4,000	4,000	0	10,57,903*	4,000	4,000	0
Kothagudem	22,000	22,000	0	31,24,130	22,000	22,000	0
Mancherial	29,671	29,671	0	31,94,344	29,671	29,671	0
Mahabubnagar	No procurement						
Nagaram	15,000	15,000	0	19,63,500	15,000	15,000	0
Peerzadiguda	30,000	30,000	30,000	58,90,000	30,000	30,000	30,000
Wardhannapet	4,000	4,000	0	4,48,000	4,000	4,000	0
Yellareddy	Details not furnished			5,61,000	Details not furnished		
Zaheerabad	20,000	20,000	0	Supplied By Mahindra Company as Corporate Social Responsibility	20,000	20,000	0
Total				**2,86,60,409**			

Source: Information furnished by the test-checked other 14 ULBs

* Includes expenditure incurred for procurement of 20 dry waste community/litter bins for placement at strategic points (*refer Appendix-4.2*)

Appendix-4.2

(Reference to Paragraph 4.1.1.1, Page 61)

Procurement of community/litter bins for source segregation of MSW by the test-checked other 14 ULBs during 2017-22

Name of the ULB	Number of community/litter bins procured			Expenditure incurred (₹)	Number of community/litter bins kept at strategic points		
	Dry waste	Wet waste	Domestic Hazardous waste		Dry waste	Wet waste	Domestic Hazardous waste
Bollaram	55	55	55	7,66,482	55	55	55
Chandur	15	15	0	45,000	15	15	0
Haliya	0	0	0	0	0	0	0
Kalwakurthy	0	0	0	0	0	0	0
Khammam	120	120	120	14,00,000	120	120	120
Khanapur	20*	0	0	*	20	0	0
Kothagudem	16	16	16	1,00,000	16	16	16
Mahabubnagar	120	120	70	10,00,000	120	120	70
Mancherial	0	0	0	0	0	0	0
Nagaram	38	38	15	1,34,500	38	38	0
Peerzadiguda	35	35	35	4,99,878	35	35	35
Wardhannapet	5	5	5	75,000	5	5	5
Yellareddy	Details not furnished			1,60,000	Details not furnished		
Zaheerabad	114	114	0	8,50,000	114	114	0
Total				**50,30,860**			

Source: Information furnished by the test-checked other 14 ULBs

*Expenditure met from procurement of 4,000 nos. of dry and wet waste bins for ₹10,57,903 (*refer Appendix-4.1*)

Appendix-4.3

(Reference to Paragraph 4.2.1, Page 69)
Vehicles available for SWM activities with the test-checked other 14 ULBs

Sl. No	Name of the ULB	Number of Households (in 2021-22)	Number of wards (in 2021-22)	No. Hotels, Restaurants, Shops *etc.*, in the ULB (in 2021-22)	Own vehicles for SWM activities		Hired vehicles for SWM activities	
					Number	Type of vehicles	Number	Type of vehicles
1.	Bollaram	17,500	22	215	17	Tractors-2 Sewer- cum-Jetting Machine-1 Autos-12 JCB-1 Sweeping Machine-1	0	0
2.	Chandur	4,133	10	600	4	Autos-1 Tractors-3	0	0
3.	Haliya	5,262	12	Not furnished	9	Autos-6 Tractors-3	0	0
4.	Kalwakurthy	7,900	22	1,100	15	Autos-11 Tractors-4	0	0
5.	Khammam	94,417	60	6,000	103	Tractors-38 Autos-64 RCV-1	0	0
6.	Khanapur	6,767	12	193	9	Autos-6 Tractors-2 Dozers-1	0	0
7.	Kothagudem	22,109	36	2,143	51	Autos-41, Tractors-5 Compactor-1 JCB-1 Sweeping Machine-2 Jetting Machine1	0	0
8.	Mahabubnagar	55,738	49	2,042	65	Proclainer-1 Autos-52 Dozers-1 Tractors-11	10	Tractor-10
9.	Mancherial	29,450	36	2,768	61	Autos-46 Tractors-15	0	0
10.	Nagaram	17,031	20	570	12	Autos-10 Tractors-2	**3**	Tractors-3
11.	Peerzadiguda	30,656	26	1,605	23	Autos-15 Tippers-2 Tractors-5 JCB-1	**53**	Autos-50, Tractors-2, JCB-1
12.	Wardhannapet	3,850	12	Not furnished	5	Autos-4 Tractors-1	0	0
13.	Yellareddy	4,196	12	252	7	Autos-5, Tractors-2	0	0
14.	Zaheerabad	23,482	37	2,500	47	Autos-40, Tractors-7	0	0
Total					**428**			

Source: Information furnished by the test-checked other 14 ULBs

Appendix-4.4

(Reference to Paragraph 4.2.2, Page 70)

Coverage of daily sweeping of roads by the test-checked other 14 ULBs

Sl. No	Name of the ULB	No of wards	Total road distance (KM)	Daily coverage of road sweeping (in KM)	Percentage of Road sweeping made on daily basis	Percentage of non-coverage of roads for daily sweeping
1.	Bollaram	22	42	36	*86*	*14*
2.	Chandur	10	12	10	*83*	*17*
3.	Haliya	12	5	5	*100*	*0*
4.	Kalwakurthy	22	10	10	*100*	*0*
5.	Khammam	60	1034	156	*15*	***85***
6.	Khanapur	12	53.82	12	*22*	***78***
7.	Kothagudem	36	191.15	45	*24*	***76***
8.	Mahabubnagar	49	395	351	*89*	*11*
9.	Mancherial	36	244	63	*26*	***74***
10.	Nagaram	20	230.41	20	*9*	***91***
11.	Peerzadiguda	26	260	260	*100*	*0*
12.	Wardhannapet	12	32	3	*9*	***91***
13.	Yellareddy	12	23.52	Data not made available	Data not made available	Data not made available
14.	Zaheerabad	37	153	48	*31*	***69***
Total		**366**	**2,685.9**	**1,019**		

Source: Information furnished by the test-checked other 14 ULBs

Appendix-4.5

(Reference to Paragraph 4.3.2, Page 76)

Vehicles utilised for SWM activities by test-checked other 14 ULBs without proper authorisation

Sl. No	Name of the ULB	Number of vehicles				Number of vehicles for which information not furnished to Audit		
		Available	Without Registration Certificate (RC)	Without valid Fitness Certificate (FC)	Without Insurance	On RC	On FC	On Insurance
1.	Bollaram	17	4	7	1	0	10	4
2.	Chandur	4	4	4	4	0	0	0
3.	Haliya	9	1	8	8	0	1	1
4.	Kalwakurthy	15	1	NF	NF	0	15	15
5.	Khammam	103	6	NF	55	0	103	48
6.	Khanapur	9	2	NF	NF	0	9	9
7.	Kothagudem	51	5	NF	2	0	0	51
8.	Mahabubnagar	65	4	61	61	0	4	4
9.	Mancherial	61	0	41	41	0	20	20
10.	Nagaram	12	11	12	0	0	0	0
11.	Peerzadiguda	23	1	13	10	0	10	10
12.	Wardhannapet	5	3	5	5	0	0	0
13.	Yellareddy	7	0	NF	NF	0	7	7
14.	Zaheerabad	47	0	47	0	0	0	0
Total		**428**	**42**	**198**	**187**	**0**	**179**	**169**

Source: Information furnished by the test-checked other 14 ULBs
NF: Information not furnished to Audit

Appendix-4.6
(Reference to Paragraph 4.3.4, Page 78)
List of Transfer Station, Secondary Collection Transport Points and Refuse Compactor Vehicles in GHMC area

Transfer Stations in GHMC area

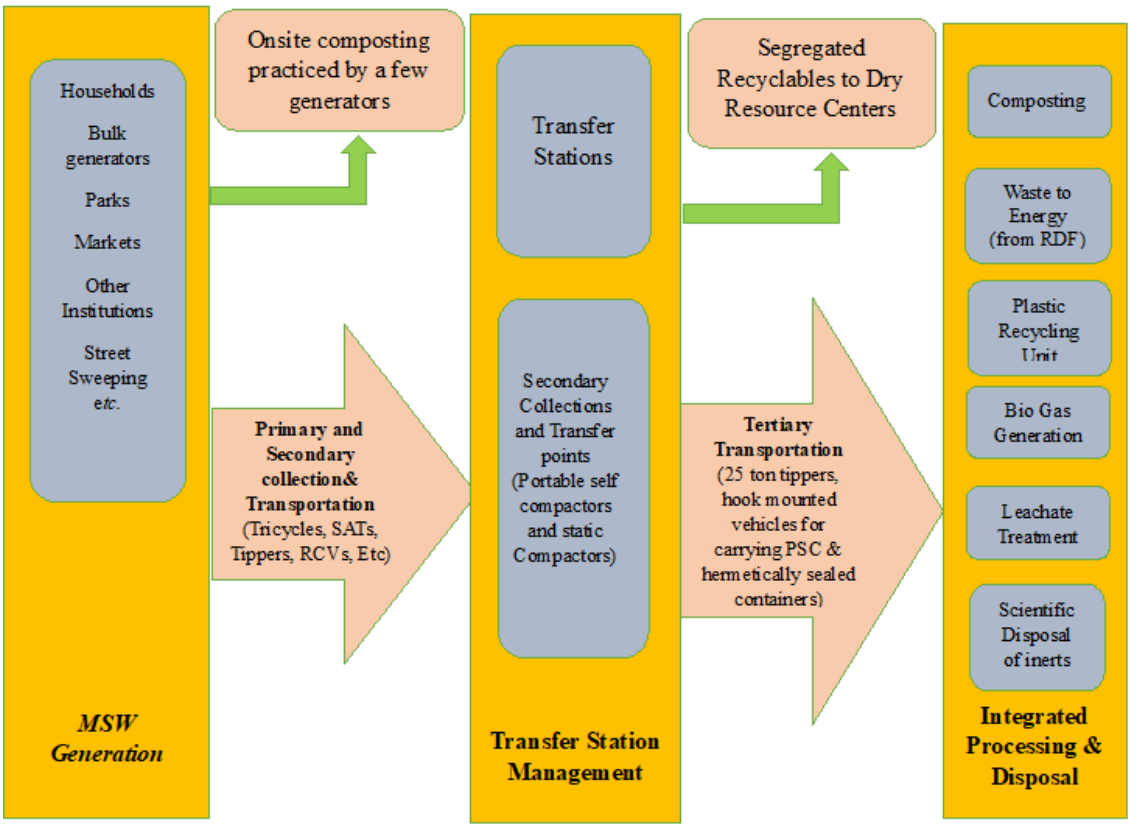
Sl. No	Zone	Location of the Transfer Station	Number of Circles Covered	Title of land	Extent of land area in acres
1	LB Nagar	Mallapur	1	GHMC	1.00
2		Saket	1	**Private land – disputed land**	0.50
3		Devender Nagar	1	Industrial Area Local Authority (IALA) land	0.65
4		Nagole	3	HMDA	1.50
5	Charminar	Imlibun	5	GHMC	0.50
6		Katedan	1	ILA land	5.25
7	Khairatabad	Jiyaguda	2	GHMC **(TS is in banks of Musi)**	1.38
8		Yousufguda	3	GHMC	0.62
9	Serlingampally	Deepthisri Nagar	1	HMDA **(Court case between heirs of the Nizam)**	3.50
10		RC puram- Patancheru	1	GHMC (Handed over from ILA)	2.60
11	Kukatpally	Khaithlapur	2	GHMC	4.90
12		HMT pipeline Chintal- Jagadgirigutta	2	HMT land	6.00
13		Machhabolarum	1	**Society land (Graveyard)**	2.00
14	Secunderabad	Neredmet- Malkajgiri	1	**Defence society land**	0.50
15		Sanjeevaiah Park	2	GHMC	1.00
16		Lower Tank Bund	1	GHMC	1.50
17		Amberpet	1	GHMC	2.50

List of SCTPs and RCVs in GHMC area

Sl. No	Location of the SCTP	Sl. No	Location of the RCVs
1	Hasthinapuram	**1**	Chintakunta
2	Autonagar	**2**	Chaitanyapuri
3	Fathe Nagar Nala	**3**	Lingojiguda
4	Metro Mall backside	**4**	Anupuram Colony
5	Jubilee Hills Civic Exnora	**5**	Bathukammakunta
6	Khajaguda	**6**	Miyapur Metro
7	Peoples Plaza	**7**	Kala Pattar
8	Vayupuri	**8**	Singareni Colony
9	Chacha Nehru Park	**9**	Babanagar
10	Jubilee Hills Road #51	**10**	OGH
11	Bandlaguda	**11**	Langer House
12	Lower Tank Bund-Goshala (ACTC)	**12**	Seethaphalmandi
13	Hasmathpet Lake	**13**	Taranaka Flyover Under Bridge
14	Sainikpuri	**14**	Malkajgiri
15	Sanathnagar	**15**	Kachiguda Railway Station
16	Madhapur under Bridge	**16**	Borabanda
17	Vengal Rao Park	**17**	OU campus
18	Osmania General Hospital Backside	**18**	Allwyn colony
19	Ramnagar	**19 to 23**	Uppal & Kapra circles (5 Nos)
20	KPHB Road No.1	**24 to 31**	Various points in Kukatpally & Secunderabad Zones (8 Nos)
21	Yellammabanda	**32 to 66**	Various points in all circles (35 Nos)
22	Karmika nagar		
23	Mir Alam Tank		
24	Nehru Nagar Area (Chandanagar)		
25	Azamoura Nala		
26	Votta Pally Temple		
27	Tadbund Labour Adda		
28	Nagina Point		

Source: Information from the document provided by GHMC

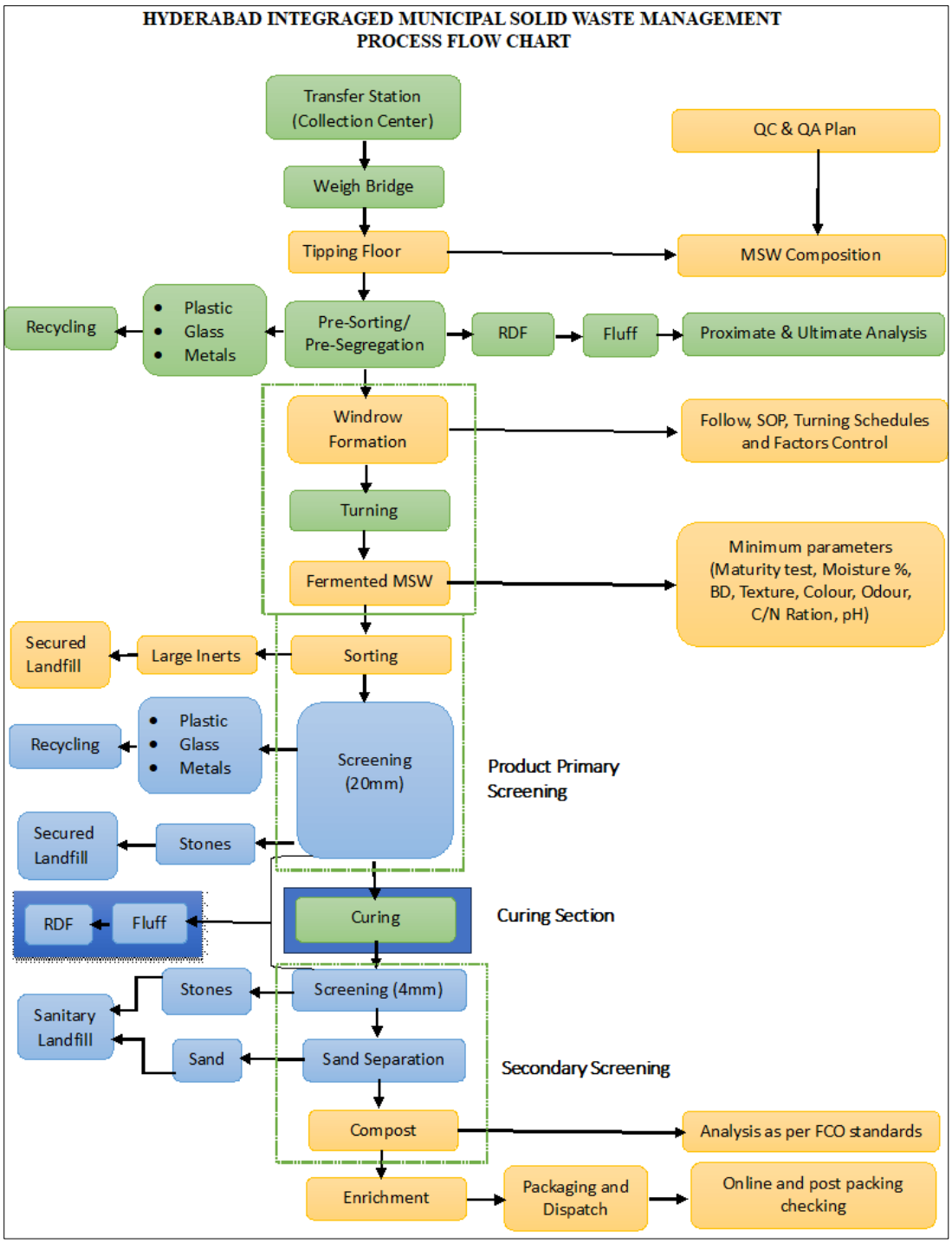
Appendix-5.1
(Reference to Paragraph 5.1.2, Page 90)
Process of MSWM from household to disposal at Jawaharnagar Treatment and Disposal facility



Source: Flowchart provided by GHMC

Appendix-5.2
(Reference to Paragraph 5.1.2, Page 90)

Process of collection, treatment and disposal of MSW at Jawaharnagar Treatment and Disposal facility



Source: Flowchart provided by M/s Ramky Enviro Engineers Limited (renamed as Re Sustainability Limited), the Concessionaire for Integrated Municipal Solid Waste Management (IMSWM) system in GHMC area

Appendix-5.3

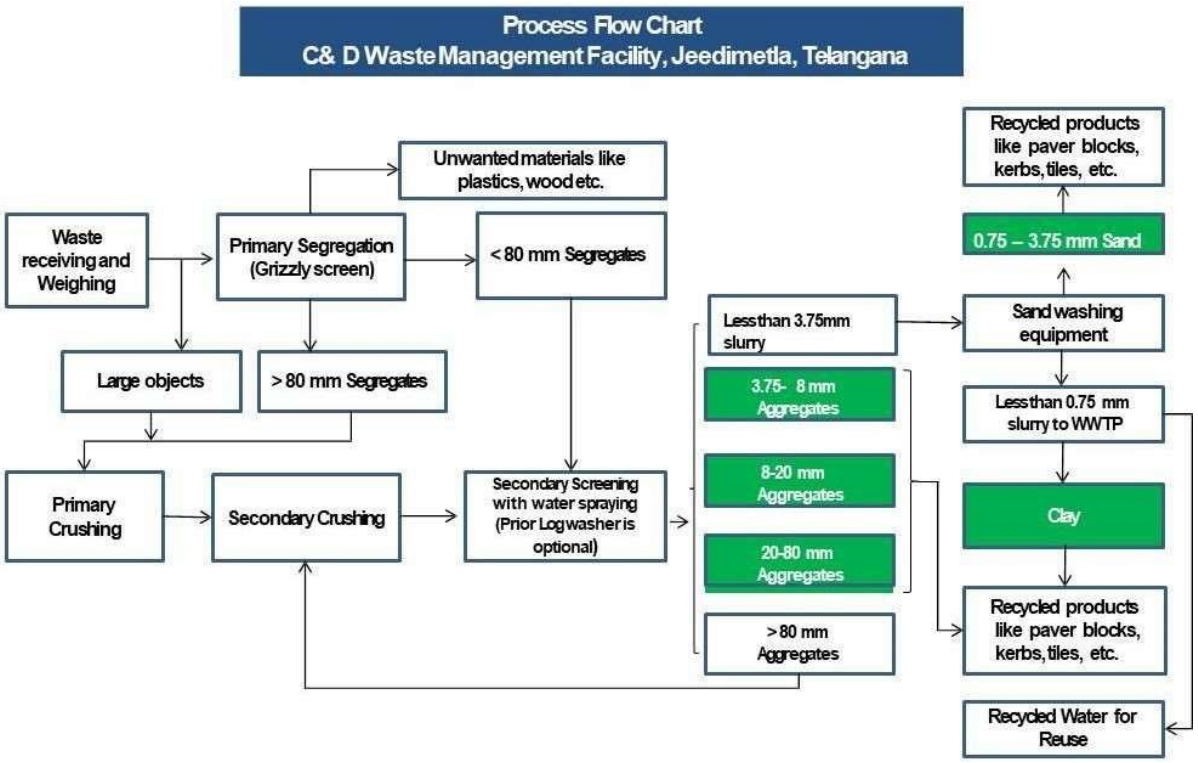
(Reference to Paragraph 5.2.4, Page 101)

Usage of land in Jawaharnagar Treatment and Disposal facility for various purposes of MSW management

Sl. No	Description of the facility	Extent of land utilised in acres
1	Administration Building	6.69
2	EPTRI Building	
3	Laboratory	
4	Internal Roads and Drains	19.09
5	WtE Plant	17.10
6	Leachate Collection Ponds, Compressed Bio-Gas area, Boulders area	4.20
7	Bio-Methanation Plant	0.17
8	RDF Storage area	13.74
9	Leachate Treatment Plant (Wastewater Collection)	3.43
10	Legacy waste capped area	123.86
11	Existing Landfill site area	16.19
12	Compost yard (Old + New)	24.00
13	Weighbridge facility	1.15
14	Auxiliary Units	11.74
15	Present Operation area	43.06
16	Greenery & Plantation	54.59
Total area utilised (A)		**339.01**
17	Disputed land (B)	12.20
Total Area (A) + (B)		**351.21**

Source: Information furnished by GHMC

Appendix-6.1
(Reference to Paragraph 6.4, Page 121)
Process Flow Chart of C&D Waste Management Facility, Jeedimetla, Telangana



Source: Flow chart provided by the Concessionaire for C&D waste

Appendix-6.2
(Reference to Paragraph 6.4, Page 122)

Statement showing quantum of cumulative unprocessed C&D waste more than previous three months cumulative collection of C&D waste during 2020-22 at Jeedimetla C&D Waste Processing Plant

(C&D waste figures in MT)

Month	Total C&D waste received	Cumulative previous 3 months total of C&D waste received	C&D waste Processed	C&D waste unprocessed	Cumulative unprocessed C&D waste
May 2020	9,196	0	3,324	5,872	5,872
Jun 2020	26,227	0	12,412	13,815	19,687
Jul 2020	92,905	0	8,580	84,325	1,04,012
Aug 2020	65,827	1,28,327	15,539	50,288	1,54,300
Sep 2020	25,306	1,84,958	11,543	13,763	1,68,063
Oct 2020	18,394	1,84,038	11,383	7,011	1,75,074
Nov 2020	28,787	1,09,527	9,962	18,825	1,93,899
Dec 2020	27,957	72,487	10,915	17,042	2,10,941
Jan 2021	31,693	75,138	6,219	25,474	2,36,415
Feb 2021	28,235	88,437	15,857	12,378	2,48,793
Mar 2021	31,045	87,886	28,617	2,428	2,51,221
Apr 2021	30,514	90,973	18,571	11,943	2,63,164
May 2021	31,953	89,794	15,768	16,185	2,79,349
Jun 2021	21,733	93,511	9,915	11,818	2,91,167
Jul 2021	20,235	84,200	3,698	16,537	3,07,704
Aug 2021	20,585	73,921	7,376	13,209	3,20,913
Sep 2021	19,282	62,553	8,507	10,775	3,31,688
Oct 2021	20,646	60,103	13,137	7,509	3,39,197
Nov 2021	17,905	60,513	13,132	4,773	3,43,970
Dec 2021	16,089	57,833	13,971	2,118	3,46,088
Jan 2022	9,121	54,640	11,811	(-)2,690	3,43,398
Feb 2022	2,975	43,116	9,276	(-)6,301	3,37,097
Mar 2022	5,817	28,186	6,084	(-)267	3,36,830

Source: Information furnished by GHMC

Fathullaguda C&D Waste Processing Plant

(C&D waste figures in MT)

Month	Total C&D waste received	Cumulative previous 3 months Total of C&D waste received	C&D waste Processed	C&D waste unprocessed	Cumulative unprocessed C&D waste
Jun 2021	23,831	0	612	23,219	23,219
Jul 2021	25,238	0	2,874	22,364	45,583
Aug 2021	16,015	0	6,310	9,705	55,288
Sep 2021	21,358	65,084	10,021	11,337	66,625
Oct 2021	14,698	62,611	3,933	10,765	77,390
Nov 2021	23,172	52,071	1,921	21,251	98,641
Dec 2021	23,301	59,228	5,703	17,598	1,16,239
Jan 2022	5,845	61,171	6,842	(-)997	1,15,242
Feb 2022	14,044	52,318	8,062	5,981	1,21,223
Mar 2022	8,830	43,190	4,318	4,512	1,25,735

Source: Information furnished by GHMC

Appendix-6.3

(Reference to Paragraph 6.12, Page 133)

Recommendation in the Road Map Report for sustainable and efficient management of C&D waste and status on implementation by GHMC

Sl. No	Name of the work track	Recommendations	Status on implementation by GHMC
1.	**User charges and penalties**	**a.** As the penalties levied are spread across different wings in GHMC, the amount collected is not being used for development of C&D waste management. Hence coordination enhancement is also required in the long- term for better levying of penalties. **b.** A common penalty framework across GHMC for C&D waste collection is essential for enhancing user awareness.	Govt. issued orders for penalties to be levied on C&D violators and need to be notified after due approval from GHMC General body. Meanwhile, to streamline the penalties, the C&D agencies were authorised to levy penalties themselves.
2.	**C&D Waste Management Plan**	**a.** There is low record-keeping for each of the obligations to be fulfilled by the Concessionaire which makes levying of penalties difficult. Hence, GHMC may develop an MIS database to monitor the concessionaire activities. As the current state stands, GHMC relies on the data provided by the concessionaire at the time of billing supported by physical slips such as pick-up slips, acknowledgment slips and weighment slip. Data flow from these may be rationalised using development of a digital monitoring database. **b.** C&D waste processing plant can be considered as a recycling industry for providing land in TSIIC industrial areas	**a.** MIS database is developed currently through Project Monitoring Unit team engaged by GHMC. **b.** Jeedimetla plant was provided in the land allotted by TSIIC only. Fathullaguda plant in GHMC land. Though the proposal of "Considering C&D waste processing plant as a recycling industry for providing land in TSIIC industrial areas" was pursued with TSIIC, the suitable sites were not materialised for the establishment of (02) more C&D waste recycling plants. Hence, alternate C&D Waste Processing plants set up on licensing model at Shamshabad and Thumukunta.
3.	**GHMC Act Amendment**	**a.** There is no provision for collection of C&D waste charges, levying of penalties and its implementation in GHMC Act. It is necessary to amend the same to avoid legal implications. **b.** Government may constitute special task force at the city level to detect and monitor the unauthorised constructions and take timely enforcement action in the manner as prescribed.	C&D Waste management proposed in the revised Hyderabad Municipal Corporation Act/GHMC Act and was under revision stage. City Level Task Force was constituted by the Town Planning Section of GHMC (May 2021) with reference to implementation of Telangana State Building Permission Approval and Self-Certification System (TS-bPASS (Telangana) to check violations and unauthorised

Sl. No	Name of the work track	Recommendations	Status on implementation by GHMC
			constructions *vis-à-vis* Building permissions sanctioned.
4.	**Works Contractors (Public Works)**	Construction and Maintenance of various infrastructure works ex: roads, drains, buildings, bridges *etc.*, generate C&D waste which is to be properly disposed. While the amount is budgeted in BOQs of the contract, the contractor disposes at an unofficial site and GHMC also pays tipping fee to concessionaire to lift the waste. This accounts for double payment. Waste generated during maintenance and other works to be lifted directly by concessionaire. Payment to the concessionaire shall be made by GHMC directly as unclaimed waste.	Constituted a committee for finalising the guidelines for transportation of C&D waste from the public works/ service providers to the respective C&D waste processing plants and usage of recycled C&D products in public works and it is under examination by the committee.
5.	**Demolition Permit**	**a.** Demolition permit works to both maintain a record of all demolitions being undertaken in the city and also act as an enforcement mechanism. The permit contains information on the location of demolition, plan for disposal of waste and proposed timeline for undertaking the work. The permit shall help in managing the influx of waste at facilities and help GHMC track demolition and construction activity at a local level. **b.** The permit may be developed and managed by the town planning department as it is similar to the Building Plan Approval System. Upon approval of the permit, a unique token number may be assigned to the applicant which shall have to be input at the time of raising requests for C&D waste pickup via the MyGHMC App. **c.** To establish a Management Information System (MIS) for C&D waste, using information tools to manage manifests from the generation of C&D waste, to discharging, transportation and disposal to allow for tracking of sources, prediction of destinations, and accountability of responsibilities	The recommendations of the Consultant on Demolition permit were submitted to Town Planning section in GHMC for taking necessary action, which was under examination stage by the Town Planning section.
6.	**Tech up-gradation**	Presently, only grievance service is available in MyGHMC app. A comprehensive system need to be developed through a mobile application which connects various stake holders involved in the C&D waste management.	Online App for C&D waste management is developed through CGG and integrated with the My GHMC app.

Sl. No	Name of the work track	Recommendations	Status on implementation by GHMC
7.	**Bulk Waste Generators**	**a.** Apply for Demolition Permit by submitting waste management plan. **b.** Approval from GHMC concerned Authority. **c.** Segregate Concrete, Soil, Steel, Wood & Plastics, bricks & mortar. **d.** Pay relevant fee for collection, transportation and processing to the Concessionaire, if not having own waste Management plan. **e.** It is observed that, on the outskirts of Hyderabad, many processing/crushing plants are being operated informally which are backed by the large scale construction firms. These processing units needs to be streamlined and authorised after the compliance with C&D rules, 2016 to reduce adverse environmental impacts. **f.** A minimum compliance criteria can be developed with a temporary permission mechanism.	The recommendation "Informal processing units and to authorise them after compliance with C&D Waste Management Rules, 2016, to reduce adverse environmental impacts" was not taken up in view of possible legal complications. No reply was furnished for status on recommendations at Sl.Nos.7 (a), (b), (c), (d) and (f).
8.	Awareness and IEC activities	**a.** Awareness and IEC activities for C&D waste for waste generators, waste collectors and waste facilitators through short- term and long-term plans. The short term plan will focus on issues of immediate importance whereas the long term plan will have a holistic and comprehensive outlook. **b.** Strengthening of internal organisational structures, systems and processes, management, leadership, governance and overall staff capacity to enhance organisational, team and individual performance. **c.** Inter-departmental coordination to generate synergies for coordination in C&D waste. **d.** Continuous engagement with citizens, societies, corporates, waste handlers via relevant channels.	IEC activities are conducted at field level with Citizens, Resident Welfare Associations, builders *etc*., and Distributed pamphlets to create the awareness among the citizen on C&D waste management plants. Interaction sessions were conducted with builder associations and contractors on the C&D waste management in GHMC. Orientation workshops were conducted with truck operators/owners on penalties for unauthorised dumping. Conducted circle level workshops through Project Monitoring Unit to enhance the awareness among the various stakeholders including GHMC staff.

Source: Information furnished by GHMC

Appendix-7.1
(Reference to Paragraph 7.10, Page 145)

Stages of Municipal Solid Waste Management Plan Implementation – Objectives and Target Audience under IEC activities

MSWM Issue	Target Audience	Objective
Generation	All waste generators in the city including informal settlements and floating population	• Reduce amount of waste generated • Promote reuse and recycling
Littering	Community	Prevent open littering by communicating penalties for littering
Burning of waste	ULB staff, community, floating population (focus on informal workers, low-income group localities)	• Prevent burning of waste as a disposal option • Dissuade and prevent open burning of waste for heating (in cities with harsh winters)
Waste segregation	All waste generators: households, commercial establishments, institutions, ULB staff	• Communicate importance of waste segregation in ensuring sustainable management of waste, performance of processing and treatment systems, and health and environmental aspects
Door-to-door collection	• Waste generators serviced by door-to-door collection (e.g., households, commercial establishments, markets, institutions, *etc.*) • ULB staff, NGOs, RWAs, *etc.*, responsible for door-to-door collection	• Provide information on level of segregation required • Provide information on waste collection schedule for different waste fractions (where applicable) • Provide information on timings of collection
Secondary collection	• Agencies involved in transportation of waste • Sanitary inspectors and other MSWM department staff	• Ensure segregated transportation of waste as per MSWM plan • Ensure adoption of best practices, efficient transportation of waste to avoid illegal dumping and malpractices
Transportation	Agencies involved in transport of waste, sanitary inspectors and other Solid Waste management department staff involved in providing or monitoring these services	• Ensuring segregated transportation of waste as per MSWM Plan • Ensuring adoption of best practices to ensure efficient transportation of waste, avoiding illegal dumping and mal- practices in waste transportation
Waste treatment orprocessing	• Community • MSWM department staff • Agencies, NGOs, and formal and informal recyclers involved in Solid Waste processing of treatment	Dissemination of the following: • Information on need for segregation for improved efficiency of waste treatment and processing • Information on planned treatment and processing facilities • Information on environmental safeguards in MSWM treatment and processing • Information on monitoring requirements • Periodic information on analysis of monitoring data
Waste disposal	• Community • MSWM department staff • Agencies, NGOs, and formal and informal recyclers involved in Solid Waste disposal	Disseminate the following: • Information on waste disposal plans of the ULB • Information on environmental safeguards in MSWM disposal facilities • Information on monitoring requirements • Periodic information on analysis of monitoring data

Source: MSWM Manual, 2016 (Section 1.4.5.13.1)

PART III – Compliance Audit Paragraphs

Appendix-1.1

(Reference to paragraph 1.2, Page 151)

Library Cess collections and remittances by Municipal Corporations and Municipalities (except GHMC)

(₹ in crore)

Year	Property Tax collected	Library Cess to be collected (8 *per cent* of column 2)	Library Cess to be remitted to ZGS (85 *per cent* of column 3)	Library Cess actually remitted to ZGS	Short remittance (column 4 *minus* 5)
1	2	3	4	5	6
2017-18	293.28	23.46	19.94	16.33	3.61
2018-19	374.28	29.94	25.45	19.19	6.26
2019-20	476.36	38.11	32.39	22.35	10.04
2020-21	584.26	46.74	39.73	26.31	13.42
2021-22	570.50	45.64	38.79	22.80	15.99
Total	**2,298.68**	**183.89**	**156.30**	**106.98**	**49.32**

Source: Information furnished by CDMA

Appendix-1.2

(Reference to paragraph 1.2, Page 151)

Library Cess collections and remittances by GHMC

(₹ in crore)

Year	Property Tax collected	Library Cess to be collected (8 *per cent* of column 2)	Library Cess actually collected	Short collection (column 3 *minus* column 4)	Library Cess to be remitted to ZGS (85 *per cent* of column 4)	Library Cess actually remitted to ZGS	Short remittance (column 6 *minus* column 7)
1	2	3	4	5	6	7	8
2017-18	774.93	61.99	58.87	3.12	50.04	8.77	41.27
2018-19	801.02	64.08	59.29	4.79	50.40	3.79	46.61
2019-20	845.82	67.67	62.09	5.58	52.78	1.80	50.98
2020-21	1,015.74	81.26	77.51	3.75	65.88	2.62	63.26
2021-22	911.87	72.94	63.75	9.19	54.19	3.14	51.05
Total	**4349.38**	**347.94**	**321.51**	**26.43**	**273.29**	**20.12**	**253.17**

Source: Information furnished by GHMC

Glossary of Abbreviations

GLOSSARY

AC bill	Abstract Contingent Bill
3R	Reduce, Reuse and Recycle
AE	Assistant Engineer
App	Application
BG	Basic Grants
BOT	Build, Operate and Transfer
BWGs	Bulk Waste Generators
C&D	Construction And Demolition
CA	Concession Agreement
CAG	Comptroller and Auditor General
CBG	Compressed Bio-Gas
CBOs	Community Based Organisations
CFE	Consent For Establishment
COD	Commercial Operations Date
CPCB	Central Pollution Control Board
CPHEEO	Central Public Health and Environmental Engineering Organisation
CSP	City Sanitation Plan
DEABAS	Double Entry Accrual Based Accounting System
DC	District Collector or Deputy Commissioner
DC bill	Detailed Contingent Bill
DHW	Domestic Hazardous Waste
DMA	Director of Municipal Administration
DPC	District Planning Committee
DPC Act	Duties, Powers and Conditions of Service Act
DPRs	Detailed Project Reports
DRCCs	Dry Resource Collection Centres
DSA	Director State Audit
EE	Executive Engineer
EIF	Environment Impact Fee
EPTRI	Environment Protection Training and Research Institute
ERMPL	Everenviro Resource Management Private Limited
FFC	Fourteenth Finance Commission
GHMC	Greater Hyderabad Municipal Corporation
GHs	Group Housings
GIS	Geographic Information System

GoI	Government of India
GP	Gram Panchayat
GPS	Global Positioning System
HCDWL	Hyderabad C&D Waste Pvt. Ltd
HIMSWL	Hyderabad Integrated Municipal Solid Waste Limited
HSCs	Hiva Static Containers
IALA	Industrial Area Local Authority
IEC	Information, Education and Communication
IEISL	M/S Indo Enviro Integrated Solutions Limited
IMSWM	Integrated Municipal Solid Waste Management
ISWM	Integrated Solid Waste Management
JPV	Joint Physical Verification
KLD	Kilo Liters Per Day
LCS	Leachate Collection System
M&E	Monitoring and Evaluation
MA&UD	Municipal Administration and Urban Development
MIS	Management Information System
MMTS	Multi-Modal Transit System
MPP	Mandal Praja Parishad
MoEFCC	Ministry Of Environment, Forest and Climate Change
MoUD	Ministry Of Urban Development
MSW	Municipal Solid Waste
MSWM	Municipal Solid Waste Management
MT	Metric Tonne
MV	Motor Vehicle
MW	Mega Watt
NGOs	Non-Governmental Organisations
NGT	National Green Tribunal
NRCs	Non-Residential Complexes
PG	Performance Grant
PPE	Personal Protection Equipment
PPP	Public Private Partnership
PRIs	Panchayati Raj Institutions
PRIASoft	Panchayati Raj Institutions Accounting Software
PR&RE	Panchayat Raj and Rural Employment
QR	Quick Response

RC	Registration Certificate
RCVs	Refuse Compactor Vehicles
RDF	Refuse Derived Fuel
RDFPPL	RDF Power Project Ltd
REEL	Ramky Enviro Engineers Ltd
RO	Reverse Osmosis
RRR	Reduce, Reuse and Recycle
SATs	Swachh Auto Tippers
SBM-U	Swachh Bharat Mission-Urban
SCTP	Secondary Collection Transport Point
SEIAA	State Level Environment Impact Assessment Authority
SHGs	Self-Help Groups
SLAB	State Level Advisory Body
SLB	Service Level Benchmark
SPCB	State Pollution Control Board
SSAAT	Society for Social Audit, Accountability and Transparency
SWM	Solid Waste Management
T&D	Treatment and Disposal
TF	Tipping Fees
TGS	Technical Guidance and Support
TPD	Tonnes Per Day
TS	Transfer Stations
TSPCB	Telangana State Pollution Control Board
ULB	Urban Local Body
VFC	Vehicle Fitness Certificate
VIC	Vehicle Insurance Certificate
WtE	Waste to Energy
ZGS	Zilla Grandhalaya Samstha
ZPP	Zilla Praja Parishad